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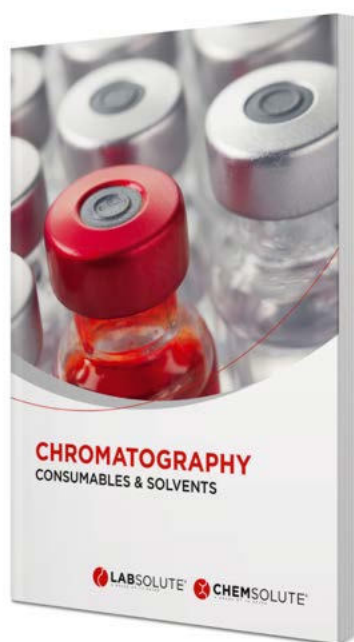
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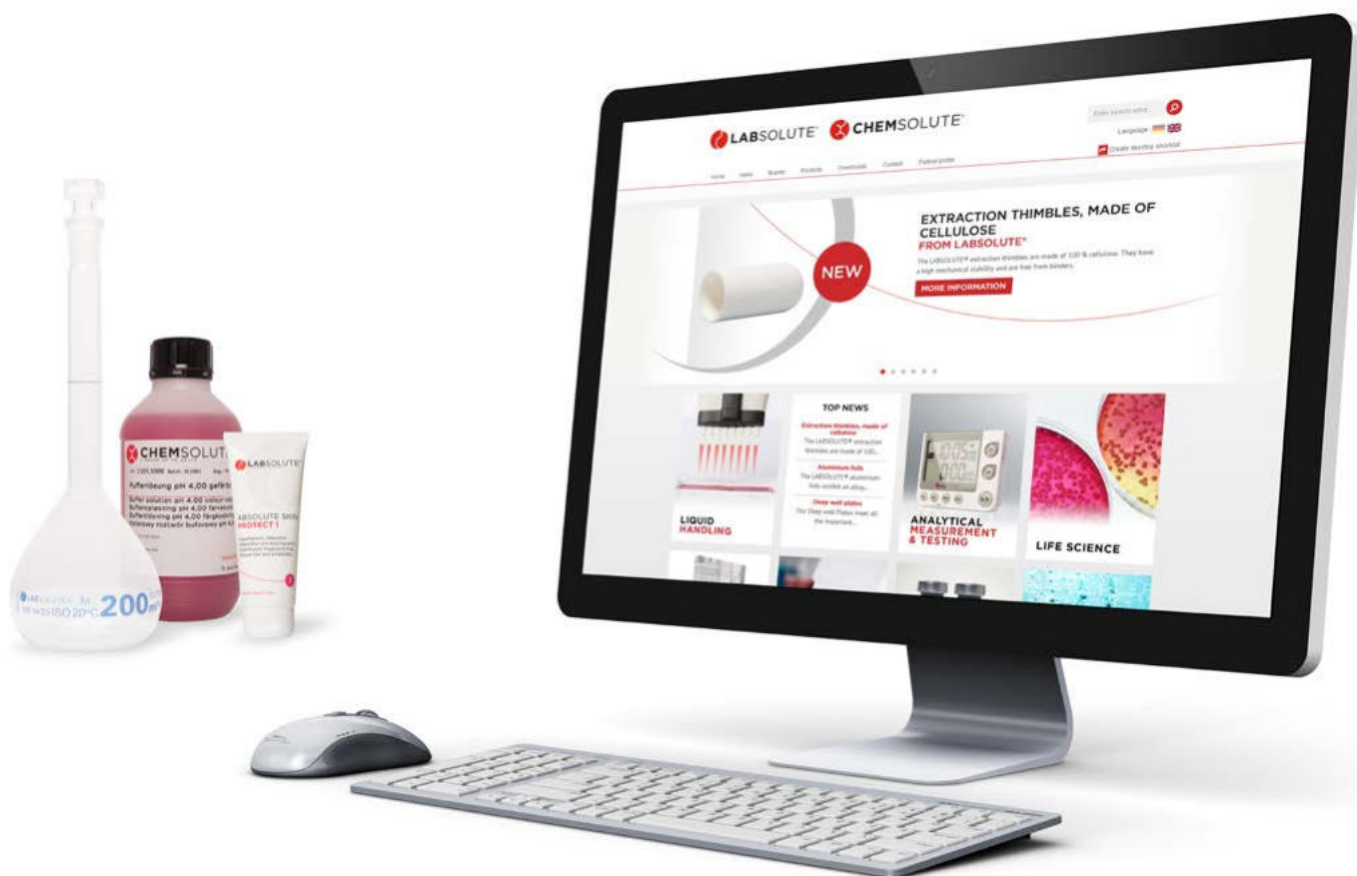
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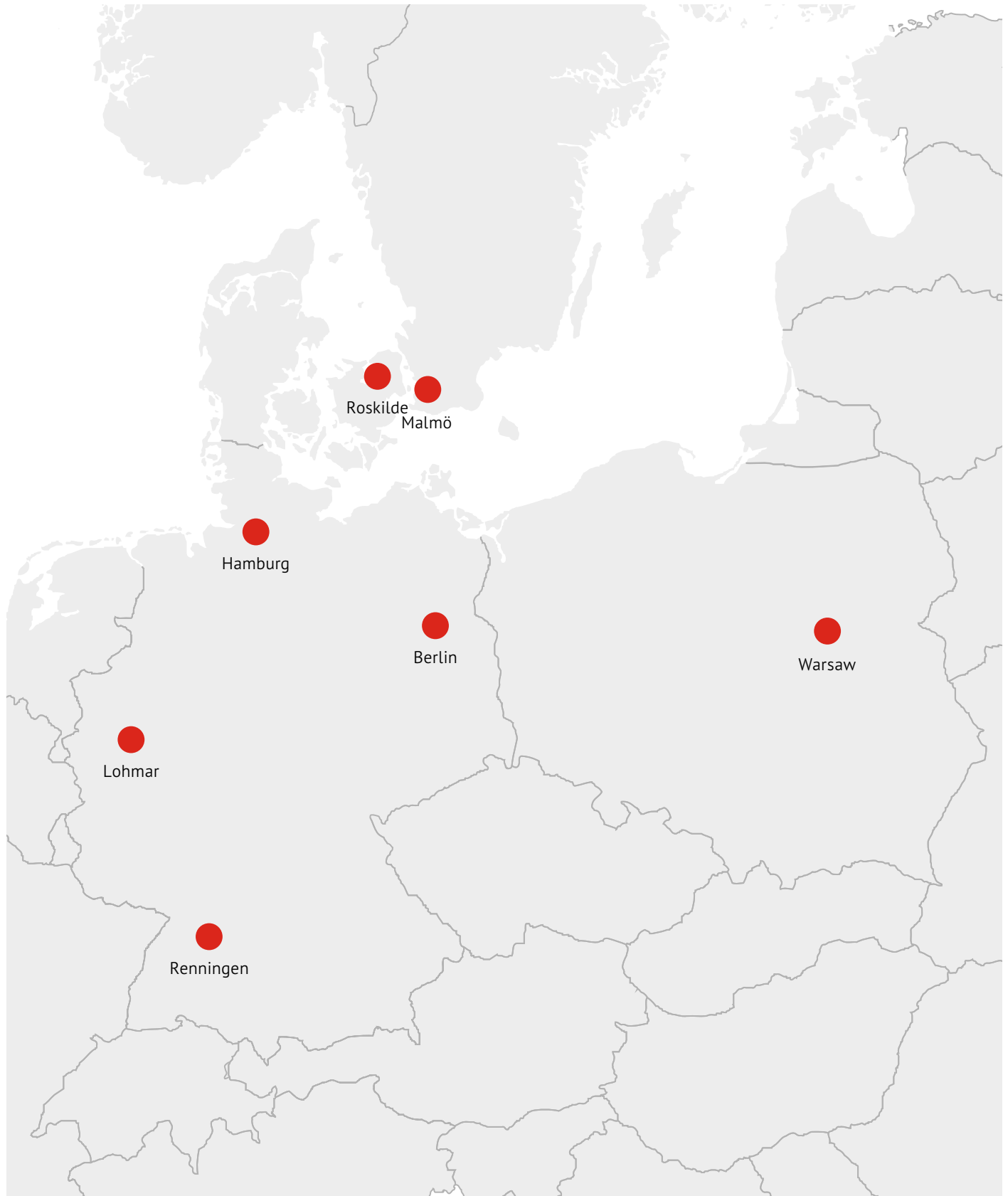
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SELECTED EXAMPLES OF NEW PRODUCTS



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**GENERAL  
LABORATORY  
EQUIPMENT**

**250** BORO 3.3 ml **LABSOLUTE** NS

## BEAKERS

LABSOLUTE® beakers with spout are made of high-quality borosilicate glass 3.3 and are therefore extremely temperature-resistant up to 500 °C. The beakers are available in low and high form. Production is compliant with DIN 12331 and ISO 3819. They have a durable volume scale and are resistant to cold lyes/alkaline solutions and strong acids, with the exception of hydrofluoric acid and hot, concentrated phosphoric acid.

### BEAKERS, LOW FORM, BOROSILICATE GLASS 3.3



Capacity ml	Ø* mm	Height mm	PK	Art. no.
5	22	30	10	7.690 000
10	26	35	10	7.690 001
25	34	50	10	7.690 002
50	42	60	10	7.690 003
100	50	70	10	7.690 004
150	60	80	10	7.690 005
250	70	95	10	7.690 006
400	80	110	10	7.690 007
600	90	125	10	7.690 008
800	100	135	10	7.690 009
1000	105	145	10	7.690 010
2000	130	185	4	7.690 011
3000	150	210	4	7.690 012
5000	170	270	2	7.690 013

\* External beaker diameter, without spout

### BEAKERS, HIGH FORM, BOROSILICATE GLASS 3.3



Capacity ml	Ø* mm	Height mm	PK	Art. no.
25	30	55	10	7.690 014
50	38	70	10	7.690 015
100	48	80	10	7.690 016
150	54	95	10	7.690 017
250	60	120	10	7.690 018
400	70	130	10	7.690 019
600	80	150	10	7.690 020
800	90	175	10	7.690 021
1000	95	180	10	7.690 022
2000	120	240	6	7.690 023
3000	135	280	6	7.690 024

\* External beaker diameter, without spout

## MEASURING AND GRIFFIN BEAKERS

The LABSOLUTE® measuring and griffin beakers are made of chemical-resistant, transparent PP and are therefore particularly lightweight. They feature a clearly legible printed scale and a functional spout and are approved for food use and autoclavable up to 121 °C. Production is compliant with ISO 7056.

- Smooth surface for quick and easy cleaning
- Excellent resistance to strong, concentrated acids and alkaline solutions/lyes as well as aliphatic alcohols
- Good resistance to ketones, aldehydes and aliphatic and aromatic hydrocarbons

### MEASURING BEAKERS WITH CLOSED HANDLE, PP

Capacity ml	Grad. ml	Ø mm	Height mm	PK	Art. no.
100	10	71	73	1	7.693 020
250	25	91	93	1	7.693 021
600	50	118	128	1	7.693 022
1000	50	141	150	1	7.693 023
2000	100	172	192	1	7.693 024
5000	500	223	262	1	7.693 025

### GRIFFIN BEAKERS (MEASURING BEAKERS WITHOUT HANDLE), PP

Capacity ml	Grad. ml	Ø mm	Height mm	PK	Art. no.
50	5	54	58	1	7.693 030
100	10	71	73	1	7.693 031
250	25	91	93	1	7.693 032
600	50	118	128	1	7.693 033
1000	50	141	150	1	7.693 034
2000	100	172	192	1	7.693 035
5000	500	223	262	1	7.693 036



## ERLENMEYER FLASKS

The LABSOLUTE® Erlenmeyer flasks with durable volume scale are made of high-quality borosilicate glass 3.3 and are therefore extremely temperature-resistant up to 500 °C. The wide-neck and narrow-neck flasks, as well as the flasks with standard ground joint comply with the valid standards. The flasks are resistant to cold lyes/alkaline solutions and strong acids with the exception of hydrofluoric acid and concentrated, hot phosphoric acid.

### ERLENMEYER FLASKS, NARROW-NECK, BOROSILICATE GLASS 3.3

Comply with ISO 1773.



Capacity ml	External flask Ø mm	Outer neck Ø* mm	Height mm	PK	Art. no.
25	42	22	75	10	7.690 025
50	51	22	90	10	7.690 026
100	64	22	105	10	7.690 027
200	79	34	135	10	7.690 028
250	85	34	145	10	7.690 029
300	87	34	160	10	7.690 030
500	105	34	180	10	7.690 031
1000	131	42	220	10	7.690 032
2000	166	50	280	6	7.690 033
3000	187	50	310	6	7.690 034
5000	220	50	365	2	7.690 035

\* Without rim

### ERLENMEYER FLASKS, WIDE-NECK, BOROSILICATE GLASS 3.3

Comply with DIN EN ISO 24450.



Capacity ml	External flask Ø mm	Outer neck Ø* mm	Height mm	PK	Art. no.
25	42	32	70	10	7.690 036
50	51	34	85	10	7.690 037
100	64	34	105	10	7.690 038
200	79	50	131	10	7.690 039
250	85	50	140	10	7.690 040
300	87	50	156	10	7.690 041
500	105	50	175	10	7.690 042
1000	131	50	220	10	7.690 043
2000	153	72	280	6	7.690 044

\* Without rim



### KJELDAHL FLASKS, BEADED RIM, BOROSILICATE GLASS 3.3

The LABSOLUTE® Kjeldahl flasks with a beaded rim without standard ground joint are made of high-quality borosilicate glass 3.3 that complies with ISO 3585. The neck diameter including rim is around 40 mm for all volumes. The flasks correspond to the standards of the European Pharmacopoeia 7 for glass type I.

Capacity ml	Ø* mm	Height mm	PK	Art. no.
100	60	200	1	7.690 070
250	81	270	1	7.690 071
500	101	300	1	7.690 072

\* Max. external flask diameter



### TEST TUBES, RIMLESS, SODA-LIME GLASS

The LABSOLUTE® test tubes made of soda-lime glass are rimless with a wall thickness of 0.7 to 0.9 mm. Compared to the borosilicate tubes they are less resistant against temperature changes and aggressive chemicals.

Ext. Ø mm	Height mm	Wall thickness mm	PK	Art. no.
12	75	0.75	144	7.690 501
12	100	0.8	144	7.690 502
16	100	0.9	78	7.690 503
16	160	0.9	100	7.690 504



### TEST TUBES, BEADED RIM, BOROSILICATE GLASS 4.9

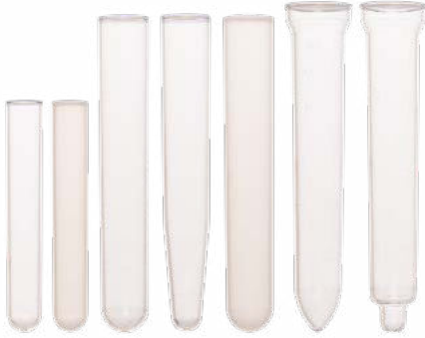
LABSOLUTE® test tubes are made of special borosilicate glass 4.9 and have a beaded rim. Despite their thin walls they are relatively unaffected by major changes in temperature and local heating. They also have excellent chemical resistance especially against acids with the exception of hydrofluoric acid and hot concentrated phosphoric acid.

Ext. Ø mm	Height mm	Wall thickness mm	PK	Art. no.
8	70	0.5	100	7.690 080
10	100	0.5	100	7.690 081
12	75	0.5	100	7.690 082
12	100	0.5	100	7.690 083
14	130	0.5	100	7.690 084
16	130	0.6	100	7.690 085
16	160	0.6	100	7.690 086
18	180	0.6	100	7.690 087
20	180	0.6	100	7.690 088



## DISPOSABLE TEST TUBES, PLASTIC

The disposable LABSOLUTE® test tubes are ideal for a variety of laboratory work. The tubes made of PP are characterized by a high thermal and mechanical strength. The crystal-clear tubes made of high-quality PS allow optimum visibility of the samples.



Ø	Height	Capacity	Bottom design	Material	PK	Art. no.
mm	mm	ml				
12	75	5	Round	PS	4000	7.696 450
12	75	5	Round	PP	4000	7.696 451
16	100	12	Round	PS	2000	7.696 452
16	100	12	Conical	PS	2000	7.696 453
16	100	12	Round	PP	2000	7.696 454
18	105	12	Conical	PS	1500	7.696 455
18	105	12	Round	PS	1500	7.696 456

## WINGED CAPS FOR TEST TUBES

The LABSOLUTE® push-in plugs guarantee high tightness thanks to the two sealing lamellas.



For tubes diam.	Colour	PK	Art. no.
mm			
12	Transparent	1000	7.696 460
12	White	1000	7.696 461
12	Blue	1000	7.696 462
12	Green	1000	7.696 463
12	Yellow	1000	7.696 464
12	Red	1000	7.696 465
16	Transparent	1000	7.696 466
16	White	1000	7.696 467
16	Blue	1000	7.696 468
16	Green	1000	7.696 469
16	Yellow	1000	7.696 470
16	Red	1000	7.696 471

## RACKS FOR PCR TUBES, PP, 96 WELLS

The LABSOLUTE racks made of PP are suitable both for 96 single 0.2 ml tubes and for strips of PCR tubes. The individual positions are marked with figures and letters which simplifies organization of your samples. With or without lid - the decision is yours: the hinged lid can be completely removed.

- Available in different colours
- Dimensions (W x H x D): 130 x 33 x 98 mm
- Well Ø: 5.2 mm
- Autoclavable

Colour	PK	Art. no.
Blue, yellow, green, orange, pink	5	7.696 360
Blue	1	7.696 361
Green	1	7.696 362
Transparent	1	7.696 363



## RACK FOR MICRO TUBES, PP, 20 WELLS

The LABSOLUTE® rack for micro tubes has 20 wells for 1.5 ml and 2.0 ml reaction vessels.

- Dimensions (W x H x D): 209 x 35 x 71 mm
- Autoclavable

Array	PK	Art. no.
2 x 10	1	7.696 350



## RACKS FOR MICRO TUBES, PP, 80 WELLS

The stable LABSOLUTE® racks made of PP provide space for up to 80 tubes (5 x 16). The wells are suitable both for 1.5 ml and 2.0 ml tubes and individually marked.

- Available in different colours
- Dimensions (W x H x D): 225 x 28 x 67 mm
- Well Ø: 11 mm
- Autoclavable

Colour	PK	Art. no.
Blue, yellow, green, orange, pink	5	7.696 351
Blue	1	7.696 352
Yellow	1	7.696 353
Green	1	7.696 354
Orange	1	7.696 355
Pink	1	7.696 356



## FLOATING RACKS, PP, 16 OR 20 WELLS

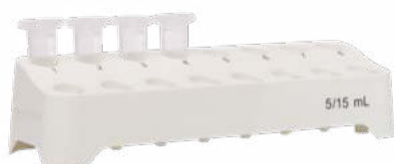


The white LABSOLUTE® racks made of PP offer several options simultaneously. The samples can be safely stored either in a water bath, on ice or simply on the bench. The legs are detachable.

- Suitable for 1.5 ml and 2.0 ml micro tubes
- Available in round or square shape
- Well Ø: 10.9 mm

Form	Wells	Size cm	PK	Art. no.
Round	20	Ø 9.8	4	7.696 358
Square	16	10.2 x 10.2	4	7.696 359

## TUBE RACK FOR 5 ML MICRO TUBES, PS, WHITE



The LABSOLUTE® tube rack has 16 wells for 5 ml micro tubes or 15 ml centrifuge tubes. The places are numbered for easy identification.

Description	PK	Art. no.
For 5 ml and 15 ml tubes	2	7.696 349

## UNIVERSAL RACKS FOR DIFFERENT TUBE SIZES, PP

The practical LABSOLUTE® racks made of PP offer space for four different sizes of tubes: 4 x 50 ml and 12 x 15 ml conical centrifuge tubes, 32 x 1.5/2.0 ml and 32 x 0.5 ml tubes. The racks feature side links so that single racks can be united to one big entity.

- Available in different colours
- Dimensions (W x H x D): 174 x 95 x 52 mm
- Well Ø:
  - 50 ml: 30 mm
  - 15 ml: 17.5 mm
  - 1.5/2.0 ml: 11.6 mm
  - 0.5 ml: 8.2 mm
- Autoclavable



Colour	PK	Art. no.
Blue, yellow, green, orange, pink	5	7.696 370
Blue	1	7.696 371
Yellow	1	7.696 372
Green	1	7.696 373
Orange	1	7.696 374
Pink	1	7.696 375
Transparent	1	7.696 376

## RACKS FOR CENTRIFUGE TUBES

The LABSOLUTE® racks for 15 ml (Ø 17 mm) and 50 ml (Ø 30 mm) centrifuge tubes are made of reinforced nylon and moulded in one piece.

- Flat labelling area
- Suitable for use in water bath
- Available in two sizes
- Autoclavable

### RACKS FOR 15 ML CENTRIFUGE TUBES

Array	Colour	Width mm	Height mm	Depth mm	PK	Art. no.
6 x 6	White	126	58	126	1	7.696 320
6 x 6	Blue	126	58	126	1	7.696 321
6 x 6	Red	126	58	126	1	7.696 322
6 x 6	Green	126	58	126	1	7.696 323
6 x 6	Yellow	126	58	126	1	7.696 324
6 x 12	White	248	70	127	1	7.696 310
6 x 12	Blue	248	70	127	1	7.696 311
6 x 12	Red	248	70	127	1	7.696 312
6 x 12	Green	248	70	127	1	7.696 313
6 x 12	Yellow	248	70	127	1	7.696 314

### RACKS FOR 50 ML CENTRIFUGE TUBES

Array	Colour	Width mm	Height mm	Depth mm	PK	Art. no.
3 x 3	White	109	84	109	1	7.696 325
3 x 3	Blue	109	84	109	1	7.696 326
3 x 3	Red	109	84	109	1	7.696 327
3 x 3	Green	109	84	109	1	7.696 328
3 x 3	Yellow	109	84	109	1	7.696 329
3 x 8	White	283	83	108	1	7.696 315
3 x 8	Blue	283	83	108	1	7.696 316
3 x 8	Red	283	83	108	1	7.696 317
3 x 8	Green	283	83	108	1	7.696 318
3 x 8	Yellow	283	83	108	1	7.696 319





## BOXES FOR CENTRIFUGE TUBES, PP

The LABSOLUTE® boxes made of PP are ideal for storage of 15 ml and 50 ml centrifuge tubes. The transparent lid provides good visibility of the tube, and the numerical index ensures rapid sample identification.



- Dimensions (W x H x D): 145 x 130 x 145 mm
- Suitable for storage at -80 °C
- Autoclavable

Description	Array	PK	Art. no.
For 15 ml tubes	6 x 6	1	7.696 300
For 50 ml tubes	4 x 4	1	7.696 301

## SAMPLE CONTAINERS, PP

The LABSOLUTE® containers are ideal for storing and transporting paste-like, powdery and liquid samples.



- Highly resistant to many chemicals
- Including screw lids
- Suitable for use with food
- Autoclavable

Capacity ml	Ø mm	Height* mm	PK	Art. no.
30	58	19	10	7.696 270
75	58	47	10	7.696 271
310	81	81	10	7.696 272
600	119	67	10	7.696 273
1250	119	130	5	7.696 274

\* Height including lid

## SAMPLE BEAKERS, PP

The transparent multi-purpose beakers from LABSOLUTE® are made of PP and suitable for the storage of solids and fluids. Delivery including screw caps made of HDPE.

- Suitable for the food sector
- Temperature resistant up to 100 °C
- Available with different-coloured screw caps
- Available in different package forms
- 120 ml / 60 ml: with graduation and labelling field (last graduation mark: 100 ml / 50 ml)
- 200 ml: without graduation and labelling field

## SAMPLE BEAKERS, NON STERILE, BULK PACKAGING

Capacity	Colour screw cap	Height*	Ø lid external	Pre-mounted screw cap	PK	Art. no.
ml		mm	mm			
60	Red	65.5	42.5	No	600	7.696 278
120	Red	72.5	62.5	No	500	7.696 280
120	Yellow	72.5	62.5	No	500	7.696 284
120	Blue	72.5	62.5	No	500	7.696 287
200	Red	80.0	64.0	Yes	200	7.696 282

\*Height including lid

## SAMPLE BEAKERS, STERILE, INDIVIDUALLY PACKED

Capacity	Colour screw cap	Height*	Ø lid external	Pre-mounted screw cap	PK	Art. no.
ml		mm	mm			
60	Red	65.5	42.5	Yes	500	7.696 279
120	Red	72.5	62.5	Yes	250	7.696 281
120	Yellow	72.5	62.5	Yes	250	7.696 285
120	Blue	72.5	62.5	Yes	250	7.696 288
200	Red	80.0	64.0	Yes	150	7.696 283

\*Height including lid

## SAMPLE BEAKERS, STERILE, BULK PACKAGING

Capacity	Colour screw cap	Height*	Ø lid external	Pre-mounted screw cap	PK	Art. no.
ml		mm	mm			
120	Red	72.5	62.5	Yes	300	7.696 275
120	Yellow	72.5	62.5	Yes	300	7.696 286
120	Blue	72.5	62.5	Yes	300	7.696 289

\*Height including lid



## CARBOYS

Carboys are ideal for mixing, transporting and storing liquids. The stable, natural coloured LABSOLUTE® balloon flasks are made of LDPE. The blue lids and the stopcock are made of PP. The carboys are extremely tight and have useful handles on both sides. They can be ordered with or without stopcock.



### CARBOYS WITHOUT STOPCOCK, LDPE

Capacity ml	Ø Top mm	Ø Body mm	Height mm	PK	Art. no.
10000	65	249	390	1	7.696 190
20000	65	285	535	1	7.696 191
50000	65	376	682	1	7.696 192



### CARBOYS WITH STOPCOCK, LDPE

Stopcock for easy removal of the liquids.

Capacity ml	Ø Top mm	Ø Body mm	Height mm	PK	Art. no.
10000	65	249	390	1	7.696 193
20000	65	285	535	1	7.696 194
50000	65	376	682	1	7.696 195



### STOPCOCK FOR CARBOYS

Fits accurately on all types of the LABSOLUTE® carboys 7.696 193, 7.696 194 and 7.696 195.

Description	PK	Art. no.
Stopcock for 7.696 193, 7.696 194 and 7.696 195	1	7.696 196

### LABORATORY BOTTLES, GL45, BOROSILICATE GLASS 3.3

The LABSOLUTE® laboratory bottles are made of high-quality borosilicate glass 3.3 and comply with the EN ISO standard 4796-1. The bottles have a retrace code, a durable volume scale as well as a GL45 thread (GL32 thread for 50 ml bottles). The bottles as well as the closures are resistant against a wide range of chemicals.

### LABORATORY BOTTLES, CLEAR, WITHOUT SCREW CAPS

Without pouring rings and screw caps. Autoclavable at 121 °C.

Capacity	Ext. Ø	Height	Neck thread	PK	Art. no.
ml	mm	mm	GL		
100	56	100	45	1	7.690 410
250	70	138	45	1	7.690 411
500	86	176	45	1	7.690 412
1000	101	225	45	1	7.690 413
2000	136	260	45	1	7.690 414
5000	181	330	45	1	7.690 415
10000	227	410	45	1	7.690 416



### LABORATORY BOTTLES, CLEAR, WITH PP SCREW CAPS

With blue pouring rings and screw caps with integrated lip seal made of PP. Autoclavable at 121 °C.

Capacity	Ext. Ø	Height*	Neck thread	PK	Art. no.
ml	mm	mm	GL		
50	46	88	32	10	7.690 060
100	56	100	45	10	7.690 045
250	70	138	45	10	7.690 046
500	86	176	45	10	7.690 047
1000	101	225	45	10	7.690 048
2000	136	260	45	10	7.690 049
5000	181	330	45	1	7.690 050
10000	227	410	45	1	7.690 051



\* Height without screw cap

## LABORATORY BOTTLES, CLEAR, WITH PBT SCREW CAPS



With red pouring rings and screw caps made of PBT with additional PTFE-coated silicone seal. The seal prevents highly volatile substances from diffusing through the lid. Sterilisable with hot air at 180 °C.

Capacity	Ext. Ø	Height*	Neck thread	PK	Art. no.
ml	mm	mm	GL		
100	56	100	45	10	7.690 053
250	70	138	45	10	7.690 054
500	86	176	45	10	7.690 055
1000	101	225	45	10	7.690 056
2000	136	260	45	10	7.690 057
5000	181	330	45	1	7.690 058
10000	227	410	45	1	7.690 059

\* Height without screw cap

## LABORATORY BOTTLES, CLEAR, PUR COATED, WITH PP SCREW CAPS



With blue pouring rings and screw caps with integrated lip seal made of PP. Autoclavable at 121 °C. The transparent coating leads to a higher resistance of the bottles against strikes and shocks, and prevents leaking in case of bottle breaking.

Capacity	Ext. Ø	Height*	Neck thread	PK	Art. no.
ml	mm	mm	GL		
250	70	138	45	1	7.690 401
500	86	176	45	1	7.690 402
1000	101	225	45	1	7.690 403
2000	136	260	45	1	7.690 404
5000	181	330	45	1	7.690 405

\* Height without screw cap

## LABORATORY BOTTLES, AMBER, WITH PP SCREW CAPS



Especially for storing light-sensitive samples. Amber glazed. With blue pouring rings and screw caps with integrated lip seal made of PP. Autoclavable at 121 °C.

Capacity	Ext. Ø	Height*	Neck thread	PK	Art. no.
ml	mm	mm	GL		
100	56	100	45	10	7.690 061
250	70	138	45	10	7.690 062
500	86	176	45	10	7.690 063
1000	101	225	45	10	7.690 064
2000	136	260	45	10	7.690 065

\* Height without screw cap



### SCREW CAPS, PP

LABSOLUTE® screw caps with integrated lip seal made of PP are the perfect complement for the LABSOLUTE® clear and amber laboratory glass bottles with GL32 or GL45 thread. There is no additional seal required. PP caps are autoclavable at 121 °C.

Colour	Neck thread GL	PK	Art. no.
Blue	32	1	7.690 391
Blue	45	1	7.690 066
Yellow	45	1	7.690 073
Green	45	1	7.690 074
Purple	45	1	7.690 075
Grey	45	1	7.690 076



### POURING RINGS, PP

LABSOLUTE® pouring rings made of PP are the perfect complement to the LABSOLUTE® clear and amber laboratory glass bottles with GL32 or GL45 thread. PP rings are autoclavable at 121 °C.

Colour	Neck thread GL	PK	Art. no.
Blue	32	1	7.690 392
Blue	45	1	7.690 067
Yellow	45	1	7.690 077
Green	45	1	7.690 078
Purple	45	1	7.690 079
Grey	45	1	7.690 089
Transparent	45	1	7.690 090



### POURING RINGS AND SCREW CAPS, PBT

The red LABSOLUTE® screw caps and pouring rings made of PBT are the perfect complement to the LABSOLUTE® clear and amber laboratory glass bottles with GL45 thread. Both the caps, delivered with a PTFE-coated silicone seal, as well as the pouring rings are temperature-resistant up to 200°C. Therefore it is possible to sterilize them with hot air at 180 °C. Evaporation of highly volatile substances is avoided by the additional seal.

Description	Neck thread GL	PK	Art. no.
Screw cap, red	45	1	7.690 068
Pouring ring, red	45	1	7.690 069



The differences and similarities of LABSOLUTE® screw caps can be found on page 354

## WIDE-MOUTH BOTTLES, PLASTIC

Thanks to their wide opening, the practical wide-mouth bottles are particularly easy to fill and clean. With 100 % tightly closing screw lids made of PP, they are ideal for shipping and storing liquid, powdery and paste-like samples. The bottles are available in various materials and colours.

## WIDE-MOUTH BOTTLES, LDPE, NATURAL

Capacity	Internal mouth Ø	Ext. Ø	Height	PK	Art. no.
ml	mm	mm	mm		
30	21.5	36.5	62.5	12	7.696 135
60	21.5	38.5	85.0	12	7.696 136
125	28.5	50.5	99.0	12	7.696 137
250	32.5	61.5	133.0	12	7.696 138
500	43.5	72.5	170.0	12	7.696 139
1000	53.0	91.5	199.0	6	7.696 140

## WIDE-MOUTH BOTTLES, HDPE, NATURAL

Capacity	Internal mouth Ø	Ext. Ø	Height	PK	Art. no.
ml	mm	mm	mm		
30	21.5	36.5	62.5	12	7.696 141
60	21.5	38.5	85.0	12	7.696 142
125	28.5	50.5	99.0	12	7.696 143
250	32.5	61.5	133.0	12	7.696 144
500	43.5	72.5	170.0	12	7.696 145
1000	53.0	91.5	199.0	6	7.696 146



## WIDE-MOUTH BOTTLES, HDPE, AMBER

Perfect for light-sensitive samples.

Capacity	Internal mouth Ø	Ext. Ø	Height	PK	Art. no.
ml	mm	mm	mm		
30	21.5	36.5	62.5	12	7.696 147
60	21.5	38.5	85.0	12	7.696 148
125	28.5	50.5	99.0	12	7.696 149
250	32.5	61.5	133.0	12	7.696 150
500	43.5	72.5	170.0	12	7.696 151
1000	53.0	91.5	199.0	6	7.696 152

## WIDE-MOUTH BOTTLES, PP, NATURAL

Autoclavable at 121 °C.

Capacity	Internalmouth Ø	Ext. Ø	Height	PK	Art. no.
ml	mm	mm	mm		
30	21.5	36.5	62.5	12	7.696 153
60	21.5	38.5	85.0	12	7.696 154
125	28.5	50.5	99.0	12	7.696 155
250	32.5	61.5	133.0	12	7.696 156
500	43.5	72.5	170.0	12	7.696 157
1000	53.0	91.5	199.0	6	7.696 158



## NARROW-MOUTH BOTTLES, PLASTIC

The versatile narrow-mouth bottles with their screw lids made of PP are 100 % tight and therefore perfect, especially for storing and transporting liquids. The bottles are available in various materials and colours.

## NARROW-MOUTH BOTTLES, LDPE, NATURAL

Capacity ml	Internal mouth Ø mm	Ext. Ø mm	Height mm	PK	Art. no.
8	13.0	25.0	44.5	12	7.696 109
15	13.0	25.0	60.0	12	7.696 110
30	13.5	36.5	62.0	12	7.696 111
60	13.5	40.5	85.0	12	7.696 112
125	17.5	51.5	101.0	12	7.696 113
250	17.5	61.5	133.0	12	7.696 114
500	21.3	73.4	170.0	12	7.696 115
1000	28.0	93.0	216.0	6	7.696 116

## NARROW-MOUTH BOTTLES, HDPE, NATURAL

Capacity ml	Internal mouth Ø mm	Ext. Ø mm	Height mm	PK	Art. no.
4	8.2	16.0	41.0	12	7.696 100
8	13.0	25.0	44.5	12	7.696 101
15	13.0	25.0	60.0	12	7.696 102
30	13.5	36.5	62.0	12	7.696 103
60	13.5	40.5	85.0	12	7.696 104
125	17.5	51.5	101.0	12	7.696 105
250	17.5	61.5	133.0	12	7.696 106
500	21.3	73.5	170.0	12	7.696 107
1000	28.0	92.0	216.0	6	7.696 108



## NARROW-MOUTH BOTTLES, HDPE, AMBER

Perfect for light-sensitive samples.

Capacity ml	Internal mouth Ø mm	Ext. Ø mm	Height mm	PK	Art. no.
4	8.2	16.0	41.0	12	7.696 117
8	13.0	25.0	44.5	12	7.696 118
15	13.0	25.0	60.0	12	7.696 119
30	13.5	36.5	62.0	12	7.696 120
60	13.5	40.5	85.0	12	7.696 121
125	17.5	51.5	101.0	12	7.696 122
250	17.5	61.5	133.0	12	7.696 123
500	21.3	73.5	170.0	12	7.696 124
1000	28.0	93.0	216.0	6	7.696 125

## NARROW-MOUTH BOTTLES, PP, NATURAL

Autoclavable at 121 °C.

Capacity ml	Internal mouth Ø mm	Ext. Ø mm	Height mm	PK	Art. no.
4	8.2	16.0	41.0	12	7.696 126
8	13.0	25.0	44.5	12	7.696 127
15	13.0	25.0	60.0	12	7.696 128
30	13.5	36.5	62.0	12	7.696 129
60	13.5	40.5	85.0	12	7.696 130
125	17.5	51.5	101.0	12	7.696 131
250	17.5	61.5	133.0	12	7.696 132
500	21.3	73.5	170.0	12	7.696 133
1000	28.0	93.0	216.0	6	7.696 134



### NARROW-MOUTH BOTTLES, LDPE, NATURAL



The versatile LABSOLUTE® narrow-mouth bottles made of LDPE can be combined with different closure types. In combination with the screw caps the bottles are 100 % tight and therefore perfect, especially for storing and transporting liquids.

The narrow-mouth bottles are tested and approved to come in contact with food according to the EU regulations 10/2011, 1282/2011, 1183/2012 and 1935/2004.

Capacity ml	Ø mm	Height* mm	Neck thread GL	PK	Art. no.
20	32	57	14	1	7.696 161
30	35	66	14	1	7.696 162
50	40	84	18	1	7.696 163
100	45	102	18	1	7.696 164
250	58	133	25	1	7.696 165

\* Without closure

### SCREW CAPS FOR NARROW-MOUTH BOTTLES, LDPE

The LABSOLUTE® screw caps made of LDPE are perfectly adapted for the narrow-mouth bottles 7.696 161 to 7.696 165 and close them 100 % tight.



Thread GL	For	PK	Art. no.
14	7.696 161, 7.696 162	1	7.696 170
18	7.696 163, 7.696.164	1	7.696 171
25	7.696 165	1	7.696 172

### DROPPING CAPS FOR NARROW-MOUTH BOTTLES, LDPE

The LABSOLUTE® dropping caps made of LDPE are perfectly adapted for the narrow-mouth bottles 7.696 161 to 7.696 165. Due to the fine and long tip, it is easy to dose the liquid very precisely. The red protection cap preserves the tip and the liquid inside the bottle.



Thread GL	For	PK	Art. no.
14	7.696 161, 7.696 162	1	7.696 174
18	7.696 163, 7.696 164	1	7.696 175
25	7.696 165	1	7.696 176

## WASH BOTTLES

The tightly closing wash bottles from LABSOLUTE® made of LDPE are ideal for dispensing liquids. The precisely shaped outlet opening on the wash bottle ensures that the right quantity of liquid is dispensed and the target of the jet is focused. LABSOLUTE® wash bottles are available with a narrow-mouth and a wide-mouth design.

### WASH BOTTLES, NARROW-MOUTH, LDPE

Capacity	Internal mouth Ø	Ext. Ø	Height	PK	Art. no.
ml	mm	mm	mm		
250	18.0	61.5	178.0	6	7.696 200
500	28.0	74.5	240.0	6	7.696 201
1000	28.0	93.0	280.0	6	7.696 202



### WASH BOTTLES, WIDE-MOUTH, LDPE

Capacity	Internal mouth Ø	Ext. Ø	Height	PK	Art. no.
ml	mm	mm	mm		
250	28.0	61.5	215.0	6	7.696 203
500	43.0	74.0	228.0	6	7.696 204
1000	43.0	91.0	276.0	6	7.696 205



## FUNNELS, SHORT STEM, BOROSILICATE GLASS 3.3

LABSOLUTE® short-stem funnels are made of high-quality borosilicate glass 3.3. They can also be used to decant and filter hot liquids. LABSOLUTE® funnels with diameter from 35 - 150 mm fit to almost every application. All funnels are manufactured on the basis of ISO 4798.

Ø	Length stem	For filter paper Ø	LC	PK	Art. no.
mm	mm	mm			
35	35	45 - 55	1X6	1	7.692 012
40	40	55 - 70	1X6	1	7.692 015
50	50	70 - 90	1X6	1	7.692 016
55	55	70 - 90	1X6	1	7.692 013
60	60	70 - 90	1X6	1	7.692 017
70	70	110 - 125	1X6	1	7.692 018
80	80	125 - 150	1X6	1	7.692 019
100	100	150 - 185	1X6	1	7.692 020
150	150	240 - 270	1X6	1	7.692 014





## FUNNELS, SHORT-STEM, PP



The LABSOLUTE® funnels made of transparent PP are autoclavable at 121 °C. Compared to glass funnels, the shatterproof PP funnels are a good and cheap alternative for almost every filtration of low-viscosity liquids. Standard filter paper fits into the funnels. Ribs on the inside ensure fast filtration. Ribs on the outside avoid air bubbles between the filter paper and the funnel's surface.

Ø mm	Length stem mm	For filter paper Ø mm	PK	Art. no.
35	52	55	12	7.692 021
55	61	90	12	7.692 022
75	80	125	6	7.692 023
100	99	180	4	7.692 024
160	151	240	2	7.692 025

## POWDER FUNNELS, PP



The unbreakable and very economic LABSOLUTE® powder funnels made of transparent PP can be autoclaved at 121 °C. The funnels are suitable to transfer powders, granulated materials and highly viscous liquids. The parallel stem prevents blockage in the funnel. There are also ribs on the inside for fast filtration and ribs on the outside to prevent air blockage.

Ø mm	Length stem mm	Ø Stem mm	PK	Art. no.
65	22	16	1	7.696 230
80	29	17	1	7.696 231
100	33	22	1	7.696 232
150	30	28	1	7.696 233

### CRYSTALLIZING DISHES, BOROSILICATE GLASS 3.3

LABSOLUTE® crystallizing dishes with or without spout are made of high-quality borosilicate glass 3.3 and are therefore extremely temperature-resistant up to 500 °C. Therefore the dishes can be easily autoclaved. They have a functional labelling field and are resistant to cold alkaline solutions/lyes and strong acids, with the exception of hydrofluoric acid and hot, concentrated phosphoric acid.

### CRYSTALLIZING DISHES, WITHOUT SPOUT, BOROSILICATE GLASS 3.3

Comply with DIN 12337.

Capacity ml	Ø mm	Height mm	PK	Art. no.
20	40	25	1	7.690 260
40	50	30	1	7.690 261
60	60	35	1	7.690 262
100	70	40	1	7.690 263
150	80	45	1	7.690 264
300	95	55	1	7.690 265
500	115	65	1	7.690 266
900	140	75	1	7.690 267
2000	190	90	1	7.690 268



### CRYSTALLIZING DISHES, WITH SPOUT, BOROSILICATE GLASS 3.3

Comply with DIN 12338.

Capacity ml	Ø mm	Height mm	PK	Art. no.
20	40	25	1	7.690 250
40	50	30	1	7.690 251
60	60	35	1	7.690 252
100	70	40	1	7.690 253
150	80	45	1	7.690 254
300	95	55	1	7.690 255
500	115	65	1	7.690 256
900	140	75	1	7.690 257
2000	190	90	1	7.690 258



### EVAPORATING DISHES, BOROSILICATE GLASS 3.3

LABSOLUTE® evaporating dishes with flat bottom and functional spout are made of high-quality borosilicate glass 3.3 and are therefore extremely temperature-resistant up to 500 °C. The autoclavable evaporating dishes comply with DIN 12336 standard and are resistant to cold alkaline solutions/lyes and strong acids, with the exception of hydrofluoric acid and hot, concentrated phosphoric acid.



Capacity ml	Ø mm	Height mm	PK	Art. no.
15	50	25	1	7.690 270
45	60	30	1	7.690 271
60	70	35	1	7.690 272
90	80	45	1	7.690 273
170	95	55	1	7.690 274
320	115	65	1	7.690 275

### EVAPORATING DISHES, PORCELAIN

LABSOLUTE® evaporating dishes are ideal for drying, concentrating and ashing sample material and comply with DIN 12903. They are glazed on the inside, temperature-resistant up to 1000 °C and have a useful spout. All LABSOLUTE® evaporating dishes are characterized by their high resistance to alkaline solutions and acids with the exception of hydrofluoric acid.

#### EVAPORATING DISHES, HALF-DEPTH SHAPE WITH ROUND BOTTOM



Capacity ml	Ø mm	Height mm	PK	Art. no.
10	40	16	5	7.694 926
20	50	20	5	7.694 927
30	63	25	5	7.694 928
60	80	32	5	7.694 929
150	100	40	5	7.694 930
300	132	55	5	7.694 931
580	160	64	5	7.694 932
1000	200	80	1	7.694 933
6000	320	140	1	7.694 934

#### EVAPORATING DISHES, LOW SHAPE WITH FLAT BASE



Capacity ml	Ø mm	Height mm	PK	Art. no.
20	60	14	5	7.694 935
28	75	15	5	7.694 936
55	80	20	5	7.694 937
110	100	25	5	7.694 938
250	130	30	5	7.694 939
450	160	40	5	7.694 940

## CRUCIBLES

The LABSOLUTE® crucibles made of high-quality laboratory porcelain are glazed on the inside and comply with DIN 12904. Due to their temperature resistance up to 1000 °C and the excellent resistance against alkaline solutions and acids with the exception of hydrofluoric acid, they are suitable for ashing a wide variety of samples.

### CRUCIBLES, LOW FORM, PORCELAIN

Capacity ml	Ø mm	Height mm	PK	Art. no.
5	30	19	5	7.694 900
10	35	22	5	7.694 901
17	40	25	5	7.694 902
21	45	28	5	7.694 903
34	50	32	5	7.694 904
62	60	38	5	7.694 905
91	70	44	5	7.694 906



### CRUCIBLES, MEDIUM FORM, PORCELAIN

Capacity ml	Ø mm	Height mm	PK	Art. no.
12	35	28	5	7.694 907
20	40	32	5	7.694 908
30	45	36	5	7.694 909
45	50	40	5	7.694 910
80	60	48	5	7.694 911
120	70	56	5	7.694 912



### CRUCIBLES, HIGH FORM, PORCELAIN

Capacity ml	Ø mm	Height mm	PK	Art. no.
15	30	38	5	7.694 913
26	35	44	5	7.694 914
35	40	50	5	7.694 915
50	45	56	5	7.694 916
72	50	62	5	7.694 917
120	60	75	5	7.694 918



## LIDS FOR CRUCIBLES

The glazed LABSOLUTE® lids, which comply with DIN 12904, are made of high-quality laboratory porcelain - the perfect addition to the crucibles with low, medium and high form from LABSOLUTE®. The lids are temperature-resistant up to 1000 °C and have an excellent resistance to alkaline solutions and acids with the exception of hydrofluoric acid.



Int. Ø mm	Ext. Ø mm	For crucibles	PK	Art. no.
30	34	7.694 900, 7.694 913	5	7.694 919
35	39	7.694 901, 7.694 907, 7.694 914	5	7.694 920
40	44	7.694 902, 7.694 908, 7.694 915	5	7.694 921
45	49	7.694 903, 7.694 909, 7.694 916	5	7.694 922
50	54	7.694 904, 7.694 910, 7.694 917	5	7.694 923
60	64	7.694 905, 7.694 911, 7.694 918	5	7.694 924
70	74	7.694 906, 7.694 912	5	7.694 925

## COMBUSTION BOATS

The unglazed LABSOLUTE® combustion boats made of porcelain are resistant to temperatures up to 1350 °C. Their eyelets allow them to be removed from the oven particularly easy after the combustion process.



Length mm	Width mm	Height mm	PK	Art. no.
40	12	10	50	7.694 974
90	13	8	50	7.694 973
75	13	8	50	7.694 972
85	13	8	50	7.694 971
105	14	9	50	7.694 970

## BARREL SPANNER



Description	PK	Art. no.
Opening aid for screw caps	1	1299.0001
Universal opening aid for canister	1	1295.0001
Opening aid for canister with 45 mm thread	1	1298.0001

## GAS LIGHTER, PIEZO IGNITION

The white LABSOLUTE® gas lighter with aluminium shaft is characterized by simple and safe handling. It can be used not only to light gas burners in laboratories. The lighter stands out with an adjustable flame with Piezo ignition, a safety lock and a viewing window to see the gas filling level easily. Due to the integrated eyelet, the LABSOLUTE® lighter can be stored quickly and is within reach at all times. The lighter comes already filled and includes a protection cap.



Description	PK	Art. no.
Gas lighter	1	7.699 990

## LABORATORY NOTEBOOKS

The LABJOURNAL offers all criteria for you to document your data and experimental processes most efficiently. Each page is numbered serially and includes space for title, signature and date. In addition, you can create a table of contents and write notes on the first pages of the notebook. The acid-free pages are ageing-resistant and therefore suitable for long-term archiving. Combined with the waterproof and chemical-resistant cover, these conditions guarantee safe documentation of your notes over many years.

- Available with different number of pages
- Available in three colours
- Available in lined or grid version
- Dimensions (W x H): 218 x 281 mm



Description	Type	Colour	PK	Art. no.
Laboratory notebook, 100 pages	Grid	Black	1	7.699 980
Laboratory notebook, 200 pages	Grid	Blue	1	7.699 981
Laboratory notebook, 200 pages	Lined	Red	1	7.699 982

## NOTEBOOK

Thanks to its handy format the LABSOLUTE® notebook is the ideal aid both for the office and the laboratory. The bright red cover turns it into a real eye-catcher which cannot be missed.

- 160 pages, grid
- Paperweight: 80 g/m<sup>2</sup>
- Acid-free, ageing resistant paper
- Book mark and elastic strap
- Red cover made from synthetic leather with LABSOLUTE® imprint
- Dimensions (W x H): 130 x 210 mm

Description	PK	Art. no.
Notebook	1	7.699 985



## LABELLING TAPES

The LABSOLUTE® labelling tapes can be used from the labelling of test tubes to the colour coding of laboratory utensils. The tapes are easy to label and leave no sticky residue when removed.

### LABELLING TAPES, LENGTH 12 M



Width mm	Colour	PK	Art. no.
12.7	White	6	7.695 150
12.7	Yellow	6	7.695 151
12.7	Green	6	7.695 152
12.7	Red	6	7.695 153
12.7	Orange	6	7.695 154
12.7	Blue	6	7.695 155
12.7	Pink	6	7.695 156
19.1	White	4	7.695 157
19.1	Yellow	4	7.695 158
19.1	Green	4	7.695 159
19.1	Red	4	7.695 160
19.1	Orange	4	7.695 161
19.1	Blue	4	7.695 162
19.1	Pink	4	7.695 163
25.4	White	3	7.695 164
25.4	Yellow	3	7.695 165
25.4	Green	3	7.695 166
25.4	Red	3	7.695 167
25.4	Orange	3	7.695 168
25.4	Blue	3	7.695 169
25.4	Pink	3	7.695 170

### LABELLING TAPES RAINBOW MIX

Compilation of the rainbow mix:

7695407: 3 x blue, 3 x green, 3 x orange, 3 x red, 5 x white, 4 x yellow and 3 x pink

7695415: 2 x blue, 2 x green, 2 x orange, 2 x red, 4 x white, 2 x yellow and 2 x pink

7695423: 1 x blue, 2 x green, 1 x orange, 2 x red, 2 x white, 2 x yellow and 2 x pink

Width mm	Length m	PK	Art. no.
12.7	12.7	24	7.695 407
19.1	12.7	16	7.695 415
25.4	12.7	12	7.695 423



## LABELLING TAPES, LENGTH 54 M

Width mm	Colour	PK	Art. no.
12.7	White	1	7.695 171
12.7	Yellow	1	7.695 172
12.7	Green	1	7.695 173
12.7	Red	1	7.695 174
12.7	Orange	1	7.695 175
12.7	Blue	1	7.695 176
12.7	Pink	1	7.695 177
19.1	White	1	7.695 178
19.1	Yellow	1	7.695 179
19.1	Green	1	7.695 180
19.1	Red	1	7.695 181
19.1	Orange	1	7.695 182
19.1	Blue	1	7.695 183
19.1	Pink	1	7.695 184
25.4	White	1	7.695 185
25.4	Yellow	1	7.695 186
25.4	Green	1	7.695 187
25.4	Red	1	7.695 188
25.4	Orange	1	7.695 189
25.4	Blue	1	7.695 190
25.4	Pink	1	7.695 191

## LABELLING TAPE DISPENSERS

The LABSOLUTE® labelling tape dispensers are ideal for organizing the labelling tapes. Single tapes can be replaced without having to remove all tapes.

Description	Material	PK	Art. no.
Dispenser for 24 m rolls	Metal	1	7.695 445
Dispenser for 54 m rolls	Metal	1	7.695 446
Dispenser for one 24 m roll	Plastic	1	7.695 447



## ALUMINIUM DISHES

The dishes are made from aluminium and exhibit a stable form.

All models have a smooth bottom which guarantees a safe standing. Suitable for the food sector.

Material properties	Capacity ml	Top ring Ø mm	Lower ring Ø mm	Int. height mm	PK	Art. no.
Smooth side walls	28	64	51	13	100	7.696 240
Crimped side walls	110	80	56	34	100	7.696 241
Crimped side walls	110	99	70	25	100	7.696 242
Smooth side walls	125	96	78	24	100	7.696 243
Crimped side walls	280	114	58	50	50	7.696 244



## ALUMINIUM ROUND DISCS

The LABSOLUTE® round discs made from pure aluminium will be delivered with tissue paper liner. Foil thickness 30 µm.

Ø mm	PK	Art. no.
29	1000	7.696 870
80	1000	7.696 871
100	1000	7.696 872
120	1000	7.696 873
130	1000	7.696 874
150	1000	7.696 875



## ALUMINIUM FOILS

The LABSOLUTE® aluminium foils exhibit an alloy made from pure aluminium (> 98 %).

- Approved for the food sector
- Oxygen gas and water vapor tight
- Resistant to fat, moisture and water
- Heat-resistant, fireproof, non-flammable
- Resistant to most chemicals
- Available in different lengths, widths and strengths
- Refilling of dispenser boxes for large rolls possible



## SMALL ROLLS IN CARTON DISPENSERS

The handy carton dispensers have a tear-off edge made from carton.

Length m	Width cm	Thickness µm	PK	Art. no.
10	30	15	1	7.696 850
10	30	30	1	7.696 851
10	45	15	1	7.696 852
10	45	30	1	7.696 853
20	30	13	1	7.696 854
20	30	15	1	7.696 855

## LARGE ROLLS IN DISPENSER BOXES

The stable dispenser boxes have a tear-off edge made from plastic. They can be used several times with the appropriate refill rolls.

Length m	Width cm	Thickness µm	PK	Art. no.
100	30	13	1	7.696 856
100	30	30	1	7.696 857
100	45	30	1	7.696 858
100	50	30	1	7.696 859
150	45	15	1	7.696 860

## REFILL ROLLS FOR DISPENSER BOXES

For refilling of dispenser boxes for large rolls. Delivery without cutter box.

Length m	Width cm	Thickness µm	Matching for artical no.	PK	Art. no.
100	30	30	7.696 857	1	7.696 861
100	45	30	7.696 858	1	7.696 862
100	50	30	7.696 859	1	7.696 863
150	45	15	7.696 860	1	7.696 864

### MAGNETIC STIRRING BARS, CYLINDRICAL, PTFE

The cylindrical LABSOLUTE® magnetic stirring bars have a smooth surface and are supplied in lengths from 10 mm to 80 mm. The PTFE coating means that they are particularly resistant to chemicals and temperatures.



Length mm	Ø mm	PK	Art. no.
10	6	10	7.695 100
15	6	10	7.695 101
20	6	10	7.695 102
25	6	10	7.695 103
30	6	10	7.695 104
35	6	10	7.695 105
40	8	10	7.695 106
45	8	10	7.695 107
50	8	10	7.695 108
60	9	10	7.695 109
70	9	10	7.695 110
80	9	10	7.695 111

### SET OF MAGNETIC STIRRING BARS, 10 PIECES, PTFE



The set of magnetic stirring bars from LABSOLUTE® is a perfect assortment of the most common sizes for almost all applications. The cylindrical, smooth, PTFE-coated stirring bars come in a solid box with transparent, hinged lid.

The set consists of the following 10 stirring bars:

1x 15 x 6 mm, 2x 20 x 7 mm, 2x 25 x 7 mm, 1x 30 x 7 mm,  
2x 40 x 7 mm, 1x 50 x 7 mm and 1x 60 x 7 mm.

Description	PK	Art. no.
Set of magnetic stirring bars	1	7.695 125

### STIRRING BAR RETRIEVERS

The LABSOLUTE® stirring bar retrievers in lengths of 150, 250 and 350 mm are suitable for removing magnetic stirring bars from vessels of all kinds. For this purpose, they have a strong permanent magnet (Alnico 5) with a 10 mm diameter. The PTFE coating means that the stirring bar retrievers are particularly resistant to chemicals and temperatures.



Length mm	Ø mm	PK	Art. no.
150	10	1	7.695 120
250	10	1	7.695 121
350	10	1	7.695 122

A hand is shown pouring a bright green powder from a white plastic container. The container has a white lid with several circular holes. The powder is falling into a red puddle on a light-colored surface. The background is a plain, light grey surface.

**OCCUPATIONAL  
SAFETY/  
SECURITY**

## SAFETY SPECTACLES

The sporty safety spectacles from LABSOLUTE® are designed to comply with EN 166 and EN 170 - and therefore match even the strictest regulations in terms of occupational protection and safety. The lenses of all spectacle models are made of high-quality polycarbonate UV 2 - 1.2. Special coating of the crystal-clear lens guarantees a scratch-proof and permanent non-fogging viewing surface. Innovative technologies and ultra-modern materials also ensure an excellent fit, distortion-free vision and 100 % UV protection – for, quite simply, comfort of the highest order.

## SAFETY SPECTACLES WAVE

Safe and pleasant working with the LABSOLUTE® wave spectacles, which guarantee a healthy environment for your eyes thanks to the innovative ventilation system and are also impressive due to their modern design.



### High wearing comfort with innovative technology

- Especially wide viewing angle and all-round protection for the eyes and eyebrows thanks to the rimless, angled design
- Slimline arms for a comfortable position, even when wearing hearing protectors and a helmet
- Metal-free clip fastening: particularly easy to operate
- Openings on the non-slip arm ends for securing a spectacles cord
- Simple cleaning thanks to the rimless frame

Description	PK	Art. no.
Safety spectacles wave	1	7.696 003

## SAFETY SPECTACLES LIGHT

Occupational safety and comfort of the highest order - and all for a weight of just 21 grams. LABSOLUTE® light combines innovative technology with ultra-modern materials to create sensationally lightweight safety spectacles.



### Innovative concept for high levels of acceptance among users

- Extremely lightweight safety spectacles
- Sporty design
- Excellent comfort and secure grip thanks to a perfect fit and soft plastic on the arm ends

Description	PK	Art. no.
Safety spectacles light	1	7.696 000

### SAFETY SPECTACLES COMPLUS

Reliable protection with superb versatility: The LABSOLUTE® safety spectacles complus are well suited for perfect, lightning-fast adaptation to different or frequently changing users.

**Excellent user-friendliness and flexibility**

- Simple adaptation thanks to the adjustable arm length and angle
- Low weight
- Excellent wearing comfort thanks to 2-component technology and soft rests on the nose, ears and forehead



Description	PK	Art. no.
Safety spectacles complus	1	7.696 001

### SAFETY SPECTACLES VISION

Ideal for spectacle wearers: LABSOLUTE® vision. These lightweight over spectacles are also impressive due to their reliable protection, unrestricted lateral view and user-friendly wearing comfort.

**Lightweight over-spectacles for your safety**

- Unrestricted lateral view
- Excellent comfort and secure grip thanks to soft plastic on the arm ends



Description	PK	Art. no.
Safety spectacles vision	1	7.696 002

### HAND PROTECTOR GRIP HEATGUARD

The red LABSOLUTE® hand protector grip HeatGuard made of silicone rubber is temperature-resistant from -50 °C to 250 °C and is the best protection for your hands against hot and cold surfaces. The two pockets for thumb and fingers fit every hand size. The nobs on the HeatGuard ensure that there is a safe, slip-resistant grip all the time. You can store the hand protector grip using one of the two eyelets.

Description	PK	Art. no.
Hand protector grip HeatGuard	1	7.696 925





## DISPOSABLE GLOVES, LATEX, POWDER-FREE

The powder-free, natural-coloured, disposable LABSOLUTE® latex gloves made of natural rubber with rolled cuff offer excellent elasticity and wearing comfort. The wall thickness of only 0.20 mm gives the gloves a snug fit like a second skin. The gloves with textured fingers can be used in a wide variety of areas such as pharmaceutical and chemical laboratories, the food industry etc.

### The LABSOLUTE® latex gloves with an AQL value of 1.5 correspond to the following standards and directives

- EN 420, EN ISO 374-1, -2, -4, -5, EN 455 1-4 and EN 16523-1
- (EU) 2016/425 (PPE in accordance with CE category III for complex risks)
- 93/42/EEC (medical device class I)
- 1935/2004 (food contact)
- ASTM 1671 / ISO 16604 (viral penetration)

### Further properties:

- Delivered in handy dispenser boxes of 100 pieces (XS, S, M, L) or 90 pieces (XL)
- Free from phthalates and softeners
- Storage life: 3 years
- Easy to put on and off and skin-friendly
- Can be worn on the left or right hand
- Not suitable to be used in cleanrooms



Size	PK	Art. no.
XS	100	7.696 910
S	100	7.696 911
M	100	7.696 912
L	100	7.696 913
XL	90	7.696 914



For the chemical resistance of LABSOLUTE® disposable gloves please see page 346 f.



## DISPOSABLE GLOVES, NITRILE SENSITIVE, POWDER-FREE

The powder-free, lavender blue, disposable LABSOLUTE® Sensitive gloves made of nitrile are flat with rolled cuff and offer excellent elasticity and wearing comfort. The gloves with a wall thickness (double) of 0.14 mm are textured on the outside. A special after-treatment makes these disposable LABSOLUTE® Sensitive gloves skin friendly and easy to put on.

### The LABSOLUTE® nitrile gloves with an AQL value of 1.5 correspond to the following standards and directives

- EN 420, EN ISO 374-1, -2, -4, -5, EN 455 1-4 and EN 16523-1
- (EU) 2016/425 (PPE in accordance with CE category III for complex risks)
- 93/42/EEC (medical device class I)
- 1935/2004 (food contact)
- ASTM 1671 / ISO 16604 (viral penetration)

### Further properties:

- Approved for the use within Hazard Analysis and Critical Control Points (HACCP) concepts
- Resistance against ethidium bromide (1 %) for more than 480 min (level 6)
- Delivered in handy dispenser boxes of 200 pieces (XS, S, M, L) or 180 pieces (XL)
- Free from phthalates, softeners and allergenic latex proteins
- Storage life: 3 years
- Can be worn on the right or left hand
- Not suitable to be used in cleanrooms



Size	PK	Art. no.
XS	200	7.696 904
S	200	7.696 900
M	200	7.696 901
L	200	7.696 902
XL	180	7.696 903



## DISPOSABLE GLOVES, NITRILE PROTECTIVE, POWDER-FREE

The powder-free, blue, disposable LABSOLUTE® Protective gloves made of nitrile with rolled cuff are the best supplement to the LABSOLUTE® Sensitive gloves for a higher protection level.

**The silicone-free gloves with a wall thickness (double) of 0.26 mm and an AQL value of 1.5 are textured on the outside and correspond to the following standards and directives**

- EN 420, EN 421, EN ISO 374-1, -2, -4, -5, EN 455 1-4 and EN 16523-1
- (EU) 2016/425 (PPE in accordance with CE category III for complex risks)
- 1935/2004 (food contact)
- ASTM 1671 / ISO 16604 (viral penetration)

### Further properties:

- Approved for the use within Hazard Analysis and Critical Control Points (HACCP) concepts
- UV transmission less than 0.1 % at 360 nm
- Delivered in handy dispenser boxes of 100 pieces (S, M, L) or 90 pieces (XL)
- Free from phthalates, softeners and allergenic latex proteins
- Storage life: 3 years
- Can be worn on the left or right hand
- Not suitable to be used in cleanrooms

Size	PK	Art. no.
S	100	7.696 906
M	100	7.696 907
L	100	7.696 908
XL	90	7.696 909



## HOLDER FOR GLOVE BOXES, STAINLESS STEEL

Holder for hygienic and easily accessible storage of glove boxes. Also suitable for dispenser boxes for laboratory wipes (7.695 251) and disposable bags (7.696 994, 7.697 000).

- Stainless steel, electrolytically polished
- Wall mounting material included
- Depth of the brackets: 85 mm

Description	Width mm	Height mm	Depth mm	PK	Art. no.
For one box	210	140	90	1	7.696 920
For three boxes	245	480	100	1	7.696 921

## SKIN PROTECTION, CARE AND CLEANING

The LABSOLUTE® Absolute Skin range is the ideal solution when it comes to protecting, cleaning and caring for your skin. All products have been adapted to the skin's natural pH value and have been microbiologically and dermatologically tested. Most products are free of colourants and silicone and are therefore also suitable for use within Hazard Analysis and Critical Control Points (HACCP) concepts. We would be delighted to provide you with proof of the skin protection effectiveness on request.

### ABSOLUTE SKIN PROTECT

This universal, unperfumed skin protector from LABSOLUTE® can be used with water-soluble and water-insoluble materials and for skin hazards that are not clearly definable.

The product is quickly absorbed into the skin. By avoiding silicone, it leaves no greasy marks after application. This makes it ideal for areas in which fingerprints would be a nuisance, such as on volumetric glassware in the laboratory.

Its good skin tolerance means that Absolute Skin Protect can also be used on the face.

Description	Capacity ml	PK	Art. no.
Absolute Skin Protect 1, unperfumed	100	1	7.695 202



### ABSOLUTE SKIN CARE

The LABSOLUTE® products in the Absolute Skin Care range are high-quality, easily absorbable, gently moisturising skincare creams containing natural oils and beeswax. The emulsion is silicone-free. The products encourage skin regeneration and can also be used on the face.

For best effects, use regularly after washing your hands, on dry skin, or also while working in the laboratory or office. The products are suitable for all skin types. Absolute Skin Care 2 has a grapefruit and green tea fragrance. Products are available in 1000 ml soft bottles suitable for the LABSOLUTE® Dispenser 7.695 215.

Description	Capacity ml	PK	Art. no.
Absolute Skin Care 1, unperfumed	100	1	7.695 201
Absolute Skin Care 2, perfumed	100	1	7.695 205
Absolute Skin Care 1, unperfumed	1000	1	7.695 206
Absolute Skin Care 2, perfumed	1000	1	7.695 207





## ABSOLUTE SKIN COMFORT

Thanks to its special composition, this LABSOLUTE® care product inhibits sweating and therefore reduces typical problems, such as skin softening and sweat breakdown. As a result, Absolute Skin Comfort is perfectly suitable for use when wearing airtight clothing, such as disposable gloves made of nitrile or latex. It is also silicone-free and non-greasy. The emulsion contains witch hazel (hamamelis) extract.

Absolute Skin Comfort increases the wearing comfort of protective clothing and makes taking gloves on and off easier.

Description	Capacity ml	PK	Art. no.
Absolute Skin Comfort 1, unperfumed	250	1	7.695 203

## ABSOLUTE SKIN CLEAN

LABSOLUTE® Absolute Skin Clean is a soap-free skin cleanser that is especially suited to sensitive and stressed skin. The product is unperfumed and free of preservatives or colourants. Absolute Skin Clean contains skin-friendly sugar tensides. It is slightly acidic and therefore reflects the pH value of the skin. The washing liquid is suitable for whole-body cleansing.

Its protective effect means that the product is especially suitable for frequent skin cleansing, even of previously damaged skin, in the care and health sector, but also in laboratories and industry.

Absolute Skin Clean is available in 2000 ml soft bottles suitable for the LABSOLUTE® Dispenser 7.695 215.



Description	Capacity ml	PK	Art. no.
Absolute Skin Clean 1, unperfumed	250	1	7.695 204
Absolute Skin Clean 1, unperfumed	2000	1	7.695 208



## ABSOLUTE SKIN FRESH

The skin-friendly, gentle cleansing gel from LABSOLUTE® is suitable for the hair and body - and even for stressed or very sensitive skin. Moisturising ingredients give the skin a relaxed and pleasantly soft feel after washing or showering.

The 2000 ml soft bottle is suitable for the LABSOLUTE® Dispenser 7.695 215.

Description	Capacity ml	PK	Art. no.
Absolute Skin Fresh, perfumed	2000	1	7.695 220

## ABSOLUTE SKIN DISPENSER

The LABSOLUTE® dispenser is suitable for holding 1000 and 2000 ml soft bottles. The fibreglass-reinforced plastic makes the dispenser shockproof and resilient. Installing the compact dispenser (dimensions - W x H x D: 144 x 314 x 130 mm) and changing the container are completely straightforward.

The large contact surface can also be operated with the elbows. The supplied package includes a plug system for controlling the pump stroke, a universal drilling template and an adhesive pad.



Description	PK	Art. no.
Absolute Skin Dispenser	1	7.695 215

## LAB COAT, 100 % COTTON

The white LABSOLUTE® lab coat is made of 100 % cotton fabric with a weight of 305 g/m<sup>2</sup>. It features a lapel collar, two pockets at the sides and one on the breast, as well as a covered push button tab. The long-sleeved coat is suitable for all kinds of standard laboratory application. Due to its UPF 50+ function it keeps off more than 98 % of the ultraviolet rays. Our comfortable LABSOLUTE® lab coat is available in women's cut in XS to 2XL size, as well as in men's cut in S to 4XL size. The individual embroidery of the lab coat with personal lettering or the company logo is possible on request.

**CUSTOM  
EMBROIDERY  
POSSIBLE**

Description	Size	PK	Art. no.
Men's cut	S	1	7.695 335
Men's cut	M	1	7.695 336
Men's cut	L	1	7.695 337
Men's cut	XL	1	7.695 338
Men's cut	2XL	1	7.695 339
Men's cut	3XL	1	7.695 340
Men's cut	4XL	1	7.695 341
Women's cut	XS	1	7.695 342
Women's cut	S	1	7.695 343
Women's cut	M	1	7.695 344
Women's cut	L	1	7.695 345
Women's cut	XL	1	7.695 346
Women's cut	2XL	1	7.695 347



## VISITOR COATS, PP



The LABSOLUTE® disposable coats made of white, breathable PP fleece are easy and comfortable to wear and are ideally suited for visitors.

- Shirt collar
- Without pockets
- With snaps
- Individually packed in a polybag

Size	PK	Art. no.
Universal	50	7.695 310



## OVERALLS, PP

The LABSOLUTE® disposable overalls with hood, elastic cuff and front zipper are made of white PP fleece and provide good protection and barrier properties and durability due to the taped seams.

Size	PK	Art. no.
L	10	7.695 315
XL	10	7.695 316
XXL	10	7.695 317



## BOUFFANT CAPS, PP

The LABSOLUTE® bouffant caps with a diameter of 52 cm and a elastic strap are made of soft and breathable PP fleece with a grammage of 10 g/m<sup>2</sup> only.

Colour	PK	Art. no.
Green	100	7.695 320
White	100	7.695 321
Blue	100	7.695 322

### SLEEVE GUARDS, PE

The LABSOLUTE® disposable sleeve guards are approximately 40 cm long, free of latex and made of strong PE film.

Colour	Thickness µm	PK	Art. no.
White	20	100	7.695 325
Blue	20	100	7.695 326
Blue	40	100	7.695 327



### SHOE COVERS, CPE

The LABSOLUTE® shoe covers made of CPE also offer protection against contamination and sensitive floors in visitor traffic, besides the classical applications in medicine and the food industry.

- Embossed, with elastic band
- Fit all shoe sizes
- Length approx. 41 cm

Description	PK	Art. no.
Shoe covers, CPE	100	7.695 330



### SHOE COVERS, PP, WITH CPE OUTSOLES

The white LABSOLUTE® shoe covers made of PP fleece with blue and stable CPE outsoles are suitable for use in hospitals, day care centres and the food industry.

- Fit all shoe sizes
- Length approx. 40 cm

Description	PK	Art. no.
Shoe covers, PP with CPE outsole	50	7.695 331



## GHS LABELS

Use the self-adhesive LABSOLUTE® labels to easily designate your materials using the universally applicable hazard symbols of the GHS system (Globally Harmonized System of classification and labelling of chemicals).



- Made of PE (thickness: 0.1 mm) with additional protective lacquer
- Signal word in three languages (German, English and Danish)
- Waterproof and solvent-resistant
- Two sizes: 26 x 37 mm and 37 x 52 mm
- Available in handy dispenser boxes of 500 labels each

Description	Signal word	Dimensions (W x H) mm	PK	Art. no.
GHS 01 Exploding Bomb	Caution	37 x 52	500	7.695 351
GHS 01 Exploding Bomb	Danger	37 x 52	500	7.695 352
GHS 02 Flame	Caution	37 x 52	500	7.695 353
GHS 02 Flame	Danger	37 x 52	500	7.695 354
GHS 03 Flame Over Circle	Caution	37 x 52	500	7.695 355
GHS 03 Flame Over Circle	Danger	37 x 52	500	7.695 356
GHS 04 Gas Cylinder	Caution	37 x 52	500	7.695 357
GHS 05 Corrosion	Caution	37 x 52	500	7.695 358
GHS 05 Corrosion	Danger	37 x 52	500	7.695 359
GHS 06 Skull & Crossbones	Danger	37 x 52	500	7.695 360
GHS 07 Exclamation Mark	Caution	37 x 52	500	7.695 361
GHS 08 Health Hazard	Caution	37 x 52	500	7.695 362
GHS 08 Health Hazard	Danger	37 x 52	500	7.695 363
GHS 09 Environment	Caution	37 x 52	500	7.695 364
GHS 01 Exploding Bomb	Caution	26 x 37	500	7.695 365
GHS 01 Exploding Bomb	Danger	26 x 37	500	7.695 366
GHS 02 Flame	Caution	26 x 37	500	7.695 367
GHS 02 Flame	Danger	26 x 37	500	7.695 368
GHS 03 Flame Over Circle	Caution	26 x 37	500	7.695 369
GHS 03 Flame Over Circle	Danger	26 x 37	500	7.695 370
GHS 04 Gas Cylinder	Caution	26 x 37	500	7.695 371
GHS 05 Corrosion	Caution	26 x 37	500	7.695 372
GHS 05 Corrosion	Danger	26 x 37	500	7.695 373
GHS 06 Skull & Crossbones	Danger	26 x 37	500	7.695 374
GHS 07 Exclamation Mark	Caution	26 x 37	500	7.695 375
GHS 08 Health Hazard	Caution	26 x 37	500	7.695 376
GHS 08 Health Hazard	Danger	26 x 37	500	7.695 377
GHS 09 Environment	Caution	26 x 37	500	7.695 378



GHS 01



GHS 02



GHS 03



GHS 04



GHS 05



GHS 06



GHS 07



GHS 08



GHS 09



## DISPOSAL BAGS, PP

With the autoclavable bags made of PP, you can dispose of your contaminated labware. Thanks to the strong PP film (50 µm) and an extra broad seam at the bottom, the bags are particularly tear-resistant. The bag size 200 x 300 mm is delivered for both versions in a handy dispenser box.

## DISPOSAL BAGS, STANDARD, PP

Autoclavable up to 134 °C. For autoclaving, the bags must only be slightly closed. Not highly transparent.

Volume ca. l	W x H mm	Film thickness µm	PK	Art. no.
2.5	200 x 300	50	100	7.697 000
8.0	300 x 500	50	500	7.697 001
38.0	400 x 780	50	500	7.697 003
60.0	600 x 800	50	100	7.697 002
110.0	700 x 1100	50	75	7.697 004
110.0	700 x 1100	50	350	7.697 005



## DISPOSAL BAGS, HIGHLY TRANSPARENT, PP

Autoclavable up to 121 °C. For autoclaving, the bags must only be slightly closed.

Volume ca. l	W x H mm	Film thickness µm	PK	Art. no.
2.5	200 x 300	50	100	7.696 994
8.0	300 x 500	50	500	7.696 995
38.0	400 x 780	50	500	7.696 996
60.0	600 x 800	50	100	7.696 997
60.0	600 x 800	50	500	7.696 998
110.0	700 x 1100	50	350	7.696 999

## HOLDER FOR DISPOSAL BAGS

The LABSOLUTE® holder for disposables bags is made of steel wire, coated with a PE resin.

- With rubber feet
- Suitable for 200 x 300 mm disposable bags (7.696 994, 7.697 000)

Height mm	Lower ring Ø mm	Top ring Ø mm	PK	Art. no.
250	160	125	1	7.697 010



## ABSORBENT FOR CHEMICALS CHEMSOLUTE® SORB

Fine polymer/mineral-based granules

- Do not create dust, suitable for all liquids
- Do not trigger hazardous reactions with chemicals
- Absorb up to 75 times their own weight
- Low and problem-free dosage
- Binder saturation recognizable by changes in colour
- Dam formation function
- Indicator function – colour change: acids (yellow)/alkalis (red)
- State-certified in accordance with Oil Binder Guidelines type III R approved for traffic areas, MPA NRW 22 000 8388 10

Quantity	Packaging material	Art. no.
1800 ml	Plastic bottle	2418.0001
4000 ml	Plastic bottle	2440.0001
5 kg	Plastic canister	2450.0001



## WASTE BAGS

The LABSOLUTE® waste bags are tear resistant, flexible and offer a wide range of applications.

The red waste bags with a material thickness of 150 µm are ideal for medical practices, hospitals or laboratories.

Description	Material	Colour	Thickness	Dimensions	PK	Art. no.
			µm	(W x H) mm		
Waste bags 120 l, type 60	LDPE	Blue	35	700 x 1100	250	7.697 020
Waste bags 70 l, type 60	LDPE	Blue	35	575 x 1000	250	7.697 021
Waste bags 70 l	LDPE	Red	150	575 x 1000	100	7.697 022
Waste bags 60 l	HDPE	Transparent	8	600 x 720	500	7.697 023
Waste bags 30 l	HDPE	Transparent	8	500 x 600	500	7.697 024



**ANALYTICAL  
MEASUREMENT  
AND TESTING**



## TEST STRIPS FOR WATER ANALYSIS

CHEMSOLUTE® test strips are ideal for determining water hardness and for the semi-quantitative detection.



- Fast and reliable detection
- Dip, compare - done
- Certified quality

Parameter	Measuring range	PK	Art. no.
Ascorbic acid	0 - 50 - 100 - 200 - 300 - 500 - 700 - 1000 - 2000 mg/l	100	2920.0001
Nitrate	0 - 10 - 25 - 50 - 100 - 250 - 500 mg/l	100	2935.0001
Nitrite	0 - 0.5 - 1 - 5 - 10 - 25 mg/l	100	2925.0001
Nitrite	0 - 2 - 5 - 10 - 20 - 40 - 80 mg/l	100	2930.0001
Peroxide	0 - 0.5 - 2 - 5 - 10 - 25 mg/l	100	2940.0001
Peroxide	0 - 1 - 3 - 10 - 30 - 100 mg/l	100	2955.0001
Phosphate	0 - 3 - 10 - 50 - 100 - 250 - 300 mg/l	100	2950.0001
Total hardness	3 - 4 - 7 - 14 - 21 °dH	100	2915.0001

## CONDUCTIVITY SOLUTIONS

The ready-to use CHEMSOLUTE® conductivity solutions are perfectly suitable for calibrations.



- Values stated at 25 °C, accuracy: ±1 %
- Directly traceable to National Institute of Standards and Technology (NIST)
- ISO 17025 Certificate

Description	Quantity ml	PK	Art. no.
84 µS/cm	500	1	1570.0500
1413 µS/cm	500	1	1575.0500
12880 µS/cm	500	1	1580.0500

## pH MEASUREMENT

### pH INDICATOR PAPER

CHEMSOLUTE® Universal pH indicator paper represents a cheaper alternative for quick determination of the pH value and comprises high-quality, solution-soaked indicator filter papers.



- pH level determination in 1.0 pH steps
- With colour scale
- Roll (L x W): 5 m x 7 mm

Range pH	pH steps	PK	Art. no.
1 - 11	1.0	1	2811.0001
1 - 14	1.0	1	2814.0001

## pH INDICATOR STRIPS

A variety of testing options and a broad choice of products: with the CHEMSOLUTE® pH indicator strips, you have everything you need for rapid and informative pH value analyses. In just a few seconds, you can create the ideal basis for your decisions – on the spot, without any prep work or accessories.

- Excellent accuracy and easy legibility
- Guaranteed not to bleed
- No contamination of the medium
- Stable backing strips with reaction colour fields

Range pH	pH steps	Type	PK	Art. no.
0 - 14	1.0	Universal	100	2714.0001
0 - 6.0	0.5	Acidic	100	2730.0001
5.0 - 10.0	0.5	Neutral	100	2770.0001
7.5 - 14.0	0.5	Alkaline	100	2790.0001
0 - 2.5	*		100	2720.0001
2.0 - 9.0	0.5		100	2740.0001
2.5 - 4.5	**		100	2750.0001
4.0 - 7.0	***		100	2760.0001
6.5 - 10.0	0.5		100	2780.0001

\* 0 - 0.5 - 1.0 - 1.3 - 1.6 - 1.9 - 2.2 - 2.5

\*\* 2.5 - 3.0 - 3.3 - 3.6 - 3.9 - 4.2 - 4.5

\*\*\* 4.0 - 4.4 - 4.7 - 5.0 - 5.3 - 5.5 - 5.8 - 6.1 - 6.3 - 7.0



## pH BUFFER SOLUTIONS

The ready-to-use buffer solutions from CHEMSOLUTE® are renowned for their quality and ease of use.

### pH BUFFER SOLUTIONS WITH COLOUR CODING

- Accuracy:  $\pm 0.02$  pH units (20 °C) or  $\pm 0.01$  pH units (25 °C)
- Traceable to the National Institute of Standards and Technology (NIST)
- Compliant with DIN 19266
- In PP bottles
- The dyed buffer solutions allow easy identification

Description	Colour	Quantity ml	PK	Art. no.
pH 4.00	Red*	1000	1	1103.1000
		1000	1	1124.1000
pH 7.00	Yellow*	1000	1	1135.1000
		1000	1	1127.1000
pH 9.00	Blue	1000	1	1129.1000
pH 10.00	Orange	1000	1	1130.1000
		1000	1	1143.1000

\* pH  $\pm 0.01$  (25 °C)



## pH BUFFER SOLUTIONS WITHOUT COLOUR CODING

- Accuracy:  $\pm 0.02$  pH units (20 °C) or  $\pm 0.01$  pH units (25 °C)
- Traceable to the National Institute of Standards and Technology (NIST)
- In PP bottles (500 ml & 1000 ml) or polytainers (5000 ml)



Description	Quantity ml	PK pro VE	Art. no.
pH 1,00	1000	1	1111.1000
pH 1,68*	500	1	1101.0500
pH 2,00	1000	1	1112.1000
pH 3,00	1000	1	1113.1000
pH 4,00*	500	1	1122.0500
pH 4,00	1000 5000	1 1	1114.1000 1114.5000
pH 5,00	1000	1	1115.1000
pH 6,00	1000	1	1116.1000
pH 6,86*	500	1	1169.0500
pH 7,00*	500	1	1139.0500
pH 7,00	1000 5000	1 1	1117.1000 1117.5000
pH 8,00	1000	1	1118.1000
pH 9,00	1000 5000	1 1	1119.1000 1119.5000
pH 10,00*	500	1	1151.0500
pH 10,00	1000 5000	1 1	1120.1000 1120.5000
pH 11,00	1000	1	1121.1000

\* pH  $\pm 0,01$  (25 °C)

## pH BUFFER SOLUTIONS IN A TWIN-NECK BOTTLE

The calibration vessel, integrated into the CHEMSOLUTE® twin-neck dispensing bottles, allows the particularly economical dispensing of solution and prevents contamination.

## pH BUFFER SOLUTIONS IN A TWIN-NECK BOTTLE WITH COLOUR CODING

- Accuracy:  $\pm 0.01$  pH units (reference temperature 20 °C)
- Traceable to the National Institute of Standards and Technology (NIST)
- Compliant with DIN 19266
- The dyed buffer solutions allow easy identification

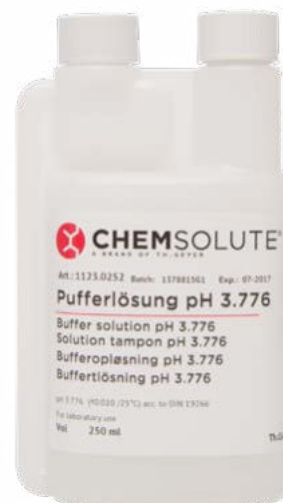


Description	Colour	Capacity ml	PK	Art. no.
pH 4.00	Red	250 1000	1 1	1134.0252 1134.1012
pH 7.00	Yellow	250 1000	1 1	1137.0252 1137.1012
pH 10.00	Blue	250 1000	1 1	1140.0252 1140.1012

## pH BUFFER SOLUTIONS IN A TWIN-NECK BOTTLE WITHOUT COLOUR CODING

- Accuracy:  $\pm 0.01$  pH units (reference temperature 25 °C)
- Traceable to the National Institute of Standards and Technology (NIST)
- Compliant with DIN 19266

Description	Quantity ml	PK	Art. no.
pH 3.776	250	1	1123.0252
pH 4.005	250	1	1125.0252
	1000	1	1125.1012
pH 6.881	1000	1	1126.1012
pH 7.413	250	1	1128.0252
	1000	1	1128.1012
pH 9.180	250	1	1131.0252
	1000	1	1131.1012
pH 10.012	250	1	1132.0252
	1000	1	1132.1012



## ELECTRODE FILLING SOLUTIONS

These high-quality electrolyte solutions are perfectly suited to the secure and reliable maintenance and care of electrodes.

- Ideal for topping up and replacing reference electrolyte solution in pH electrodes
- Suitable for long-term wet storage of the electrodes
- Can be traced to Standard Reference Material (SRM) from the National Institute of Standards and Technology (NIST)

Description	Quantity ml	PK	Art. no.
Lithium chloride solution 1 mol/l in ethanol	100	1	2230.0100
Potassium chloride solution 3 mol/l, free from silver ions	1000	1	1619.1000
	5000	1	1619.5000
Potassium chloride solution 3 mol/l, saturated with AgCl	1000	1	1633.1000
Potassium chloride solution 5 % dissolved oxygen electrolyte	100	1	2265.0100







## ELECTRODE STORAGE SOLUTIONS

The high-quality electrode storage solutions from CHEMSOLUTE® are perfectly suited for the safe and reliable storage of electrodes.

- Traceable to the Standard Reference Material (SRM) of the National Institute of Standards and Technology (NIST)

Description	Capacity ml	PK	Art. no.
Potassium chloride solution 2.9 - 3.1 mol/l	500	1	2239.0500
Potassium chloride solution 2.9 - 3.1 mol/l	1000	1	2239.1000



## ELECTRODE CLEANING SOLUTIONS

The CHEMSOLUTE® range offers the best solutions for the cleaning and regeneration of your electrodes.

- Pepsin/HCl cleaning solution for cleaning pH combined electrodes of organic contamination such as proteins
- Thiourea/HCl cleaning solution for removing silver sulphide from diaphragms

Description	Capacity ml	PK	Art. no.
Pepsin/HCl cleaning solution	1000	1	2213.1000
Thiourea/HCl cleaning solution	1000	1	2247.1000

## SAMPLE DISHES WITH HANDLE, ALUMINIUM

The LABSOLUTE® sample dishes made of aluminium are stable in form but yet of low weight. The smooth and flat bottom guarantees a firm stand. With practical hand grip. Temperature resistance guaranteed up to 210 °C.



Dimensions (Ø x H) mm	PK	Art. no.
43 x 12	100	7.696 265
57 x 14	100	7.696 266
70 x 16	100	7.696 267

## SAMPLE DISHES WITHOUT HANDLE, ALUMINIUM

Thanks to the high-grade aluminium the LABSOLUTE® dishes are perfectly suited for moisture analysis. Temperature resistance guaranteed up to 210 °C. Foil strength ca. 20 µm.



Dimensions (Ø x H) mm	PK	Art. no.
101 x 8	50	7.696 268



## WEIGHING BOATS

The LABSOLUTE® weighing boats made of PS feature smooth surfaces to transfer each kind of sample easily with minimal sample loss. The material is antistatic, biologically inert and resistant to both weak and diluted acids, bases and alcohols and to temperatures from -10 °C up to 70 °C. All dishes are food-grade compliant and can be used with microwave moisture analyzers. Available in white and black.

### WEIGHING BOATS, SQUARE, PS

The antistatic dishes feature a flat bottom for a secure stand. The round corners simplify the transfer of each kind of sample.

Colour	Volume ca. ml	Dimensions W x H x D mm	PK	Art. no.
White	7	46 x 8 x 46	500	7.696 256
White	100	85 x 24 x 85	500	7.696 257
White	250	140 x 22 x 140	500	7.696 258
Black	7	46 x 8 x 46	500	7.696 259
Black	100	85 x 24 x 85	500	7.696 260
Black	250	140 x 22 x 140	500	7.696 261



### WEIGHING BOATS, DIAMOND-SHAPED, PS

The flexible design of these antistatic weighing dishes is ideally suited to transfer even small amounts of samples precisely.

Colour	Volume ca. ml	Dimensions W x H x D mm	PK	Art. no.
White	5	55 x 6 x 35	500	7.696 250
White	30	78 x 14 x 56	500	7.696 251
White	100	119 x 19 x 90	500	7.696 252
Black	5	55 x 6 x 35	500	7.696 253
Black	30	78 x 14 x 56	500	7.696 254
Black	100	119 x 19 x 90	500	7.696 255



## WEIGHING PAPER

The smooth surface of the weighing papers guarantees a good sample recovery.

- Dimensions (W x D): 95 x 110 mm
- Weight: 45 g/m<sup>2</sup>

Description	PK	Art. no.
Weighing paper	250	7.697 925



## TIME MEASUREMENT

The LABSOLUTE® range offers you a practical selection of precise chronometers which provide functions geared towards the requirements of the laboratory sector.

### JUMBO TIMER

This LABSOLUTE® jumbo timer has the advantage of an extra large display and the practical combination of an audible and visual alarm. During the countdown, the start and stop button lights up green; once the time has expired, the audible signal and the red light both indicate the end of the countdown.



- Dimensions (W x H x D): 90 x 60 x 20 mm
- 2 x AAA batteries included
- Four-digit display up to 99 minutes, 59 seconds
- Countdown and countup function
- Triple memory function
- Alarm volume has three level settings
- Simple fastening with magnet, clip and stand

Description	PK	Art. no.
Jumbo timer	1	7.695 453

### DUAL TIMER

Two electronic timers in one device: the LABSOLUTE® dual timer is ideal for comparing different countdown or countup times. The elapsed time is indicated both audibly and visibly by the T1 and T2 buttons lighting up green and then red during the countdown. Intuitive operation: the large convenient display as well as clearly legible figures make this timer exceptionally easy to use.



- Dimensions (W x H x D): 90 x 75 x 20 mm
- 2 x AAA batteries included
- Large display with two-part display, each six-digit, up to 99 hours, 59 minutes, 59 seconds
- Audible alarm volume has three level settings
- Visual alarm
- Memory function
- Simple fastening with magnet, clip and stand

Description	PK	Art. no.
Dual timer	1	7.695 454

## BASIC TIMER

Handy, lightweight and functional timer in a sleek design.

- Dimensions (W x H x D): 50 x 69 x 8 mm
- LR-44 battery included
- Countdown function
- Four-digit display up to 99 minutes, 59 seconds
- With magnet on the back side
- With power switch on the back side for longer battery life

Description	PK	Art. no.
Basic timer	1	7.695 455



## MECHANICAL TIMER

Practical mechanical LABSOLUTE® timer in robust white casing with white rotary knob and black scale.

- Dimensions (W x H x D): 68 x 68 x 40 mm
- No need for batteries
- Variable attachment options for mounting or hanging with a sticker that allows the timer to be secured to smooth surfaces
- Available as a 60- or 120-minute timer

Description	PK	Art. no.
Mechanical timer 0 - 60 min	1	7.695 452
Mechanical timer 0 - 120 min	1	7.695 451





## ELECTRONIC STOPWATCH

The LABSOLUTE® stopwatch counts up to 30 minutes at one hundredth of a second accuracy and then up to 24 hours to the second. Each watch is calibrated in an accredited laboratory and supplied with a calibration certificate.

- Alarm function
- Time and calendar display
- Memory function (stores a lap time)
- Including CR2032 battery

Description	PK	Art. no.
Electronic stopwatch	1	7.695 459



## ELECTRONIC STOPWATCH WITH DUAL DISPLAY

The LABSOLUTE® dual display stopwatch displays cumulative split time and interval split times simultaneously. The housing made of ABS plastic is waterproof and extremely robust. Each watch is calibrated in an accredited laboratory and supplied with a calibration certificate.

- Time and calendar display
- Memory function (stores 30 lap time)
- Including CR2032 battery

Description	PK	Art. no.
Electronic stopwatch with dual display	1	7.695 460

A hand wearing a blue nitrile glove holds a white paper bag. Inside the bag, four slices of kiwi fruit are visible. A red circular graphic with white text is overlaid on the right side of the bag. The background is a blurred laboratory or kitchen setting.

**SAMPLE  
PREPARATION**

**PLEASE  
ORDER PESTLES  
SEPARATELY**



## MORTARS, PORCELAIN

The LABSOLUTE® mortars are made of high-quality porcelain complying with DIN 12906. The inner surface and base are unglazed. The rough pounding surface leads to a best possible grinding result.

Capacity ml	Ø mm	Height mm	PK	Art. no.
70	63	41	1	7.694 941
160	90	56	1	7.694 942
400	125	71	1	7.694 943
650	150	90	1	7.694 944
1000	180	104	1	7.694 945
2250	224	127	1	7.694 946

## PESTLES, PORCELAIN

The LABSOLUTE® pestles are made of high-quality porcelain complying with DIN 12906. They have an unglazed head and a glazed handle as well as a rough pounding surface.

Head Ø mm	Length mm	PK	Art. no.
24	115	1	7.694 947
30	135	1	7.694 948
36	150	1	7.694 949
42	175	1	7.694 950
55	210	1	7.694 951
74	250	1	7.694 952
85	280	1	7.694 953

## BLENDER BAGS, STERILE, PE

The bags from LABSOLUTE® are designed for safe and rapid homogenization of solid samples prior to microbiological and chemical analysis. The bags are made of high-quality, pure PE and suitable for contact with food. LABSOLUTE® offers three versions: without filter, with side fleece filter with a pore size of <250 µm or with a full-page fleece filter with a pore size of <280 µm.

- Bags fit into all standard 400 ml laboratory homogenizers
- Temperature resistant from -40 °C to 80 °C
- Gamma sterile

Description	Dimensions (W x H) mm	PK	Art. no.
Without filter	180 x 300	500	7.696 480
Lateral filter	190 x 300	500	7.696 481
Full page filter	190 x 300	500	7.696 482



**DISTILLATION,  
SEPARATION &  
FILTRATION**



## ERLENMEYER FLASKS

The LABSOLUTE® Erlenmeyer flasks with durable volume scale are made of high-quality borosilicate glass 3.3 and are therefore extremely temperature-resistant up to 500 °C. The wide-neck and narrow-neck flasks, as well as the flasks with standard ground joint comply with the valid standards. The flasks are resistant to cold lyes/alkaline solutions and strong acids with the exception of hydrofluoric acid and concentrated, hot phosphoric acid.

## ERLENMEYER FLASKS, WITH STANDARD GROUND JOINT, BOROSILICATE GLASS 3.3

Comply with DIN EN ISO 4797. Without stopper. Compatible with all stoppers with standard ground joint made of glass or plastic.



Capacity ml	Socket NS	Flask Ø mm	Height mm	PK	Art. no.
25	14/23	42	75	1	7.690 210
50	14/23	51	85	1	7.690 211
100	14/23	64	105	1	7.690 212
50	29/32	51	85	1	7.690 213
100	29/32	64	105	1	7.690 214
200	29/32	79	131	1	7.690 215
250	29/32	85	140	1	7.690 216
300	29/32	87	156	1	7.690 217
500	29/32	105	175	1	7.690 218
1000	29/32	131	220	1	7.690 219
2000	29/32	166	280	1	7.690 220



## ROUND BOTTOM FLASKS

The LABSOLUTE® round bottom flasks made of high-quality borosilicate glass 3.3 comply with the valid standards. They are available in different volumes and have the common ground joint sizes. All LABSOLUTE® round bottom flasks are characterized by very good chemical and temperature resistance. Because of the round shape, the flasks are ideal for consistent heating of liquids. Due to the standard ground joints, the flasks can be easily combined with other glass labware such as condensers.

### ROUND BOTTOM FLASKS, WITH STANDARD GROUND JOINT, BOROSILICATE GLASS 3.3

Comply with DIN EN ISO 4797.

Capacity ml	Socket NS	Flask Ø mm	Height mm	PK	Art. no.
10	14/23	33	70	1	7.690 100
25	14/23	41	85	1	7.690 101
50	14/23	51	90	1	7.690 102
50	29/32	51	90	1	7.690 103
100	14/23	64	105	1	7.690 104
100	29/32	64	105	1	7.690 105
250	29/32	85	140	1	7.690 106
500	29/32	105	163	1	7.690 107
1000	29/32	131	200	1	7.690 108
2000	29/32	165	240	1	7.690 109



### TWO NECK ROUND BOTTOM FLASKS, SIDE NECK 20°, BOROSILICATE GLASS 3.3

Comply with DIN 12394.

Capacity ml	Centre neck NS	Side neck NS	Flask Ø mm	Height mm	PK	Art. no.
25	14/23	14/23	41	85	1	7.690 130
50	14/23	14/23	51	90	1	7.690 131
100	14/23	14/23	64	105	1	7.690 132
100	29/32	14/23	64	105	1	7.690 133
250	29/32	14/23	85	140	1	7.690 134
500	29/32	14/23	105	163	1	7.690 135
1000	29/32	14/23	131	200	1	7.690 136



## THREE NECK ROUND BOTTOM FLASKS, SIDE NECKS PARALLEL, BOROSILICATE GLASS 3.3

Comply with DIN 12394.



Capacity ml	Centre neck NS	Side neck NS	Flask Ø mm	Height mm	PK	Art. no.
100	29/32	14/23	64	105	1	7.690 160
250	29/32	14/23	85	140	1	7.690 161
250	29/32	29/32	85	140	1	7.690 170
500	29/32	14/23	105	163	1	7.690 162
500	29/32	29/32	105	163	1	7.690 171
1000	29/32	14/23	131	200	1	7.690 163
1000	29/32	29/32	131	200	1	7.690 172
2000	29/32	14/23	165	240	1	7.690 164
2000	29/32	29/32	165	240	1	7.690 173
3000	29/32	29/32	185	260	1	7.690 174
5000	29/32	29/32	223	305	1	7.690 175

## THREE NECK ROUND BOTTOM FLASKS, SIDE NECKS 20°, BOROSILICATE GLASS 3.3

Comply with DIN 12394.



Capacity ml	Centre neck NS	Sideneck NS	Flask Ø mm	Height mm	PK	Art. no.
50	29/32	14/23	51	90	1	7.690 140
100	29/32	14/23	64	105	1	7.690 141
250	29/32	14/23	85	140	1	7.690 142
250	29/32	29/32	85	140	1	7.690 150
500	29/32	14/23	105	163	1	7.690 143
500	29/32	29/32	105	163	1	7.690 151
1000	29/32	14/23	131	200	1	7.690 144
1000	29/32	29/32	131	200	1	7.690 152
2000	29/32	14/23	166	240	1	7.690 145
2000	29/32	29/32	166	240	1	7.690 153

### FLAT BOTTOM FLASKS, WITH STANDARD GROUND JOINT, BOROSILICATE GLASS 3.3

The LABSOLUTE® one neck flat bottom flasks are made of high-quality borosilicate glass 3.3 and therefore extremely temperature-resistant up to 500 °C. The flasks comply with the standard DIN EN ISO 4797. They are resistant to cold lyes/alkaline solutions and strong acids with the exception of hydrofluoric acid and concentrated, hot phosphoric acid. Because of the round shape the flasks are ideal for a consistent heating of liquids. The flat bottom guarantees a secure stand on the lab bench. Due to the standard ground joint the flasks can be easily combined with several other glass labware like condensers, etc.

Capacity ml	Socket NS	Flask Ø mm	Height mm	PK	Art. no.
50	29/32	51	85	1	7.690 110
100	29/32	64	103	1	7.690 111
250	29/32	85	130	1	7.690 112
500	29/32	105	160	1	7.690 113
1000	29/32	131	187	1	7.690 114
2000	29/32	166	230	1	7.690 115



### PEAR SHAPED FLASKS, WITH STANDARD GROUND JOINT, BOROSILICATE GLASS 3.3

The LABSOLUTE® one neck pear shaped flasks are made of high-quality borosilicate glass 3.3 and therefore extremely temperature-resistant up to 500 °C. The flasks comply with the standard DIN 12383. They are resistant to cold lyes/alkaline solutions and strong acids with the exception of hydrofluoric acid and concentrated, hot phosphoric acid.

Capacity ml	Socket NS	Flask Ø mm	Height mm	PK	Art. no.
10	14/23	31	74	1	7.690 120
25	14/23	42	90	1	7.690 121
50	14/23	51	100	1	7.690 122
50	29/32	51	100	1	7.690 123
100	14/23	64	130	1	7.690 124
100	29/32	64	130	1	7.690 125
250	14/23	85	150	1	7.690 126



LABSOLUTE® stoppers please see page 77

## REFLUX CONDENSER



The LABSOLUTE® reflux condenser made of high-quality borosilicate glass 3.3 comply with the actual valid standards. You can choose between condenser according to Allihn, Dimroth and Liebig in several length and with different socket and cone connections. The water connection goes via a GL14 screw thread in combination with PP olives or via simple glass olives. All reflux condenser win over a very good chemical resistance and a high temperature resistance. You can use our LABSOLUTE® condenser for distillation, chemical synthesis, and many more laboratory applications.

### CONDENSER ACC. TO ALLIHN, PP OLIVES, BOROSILICATE GLASS 3.3

Comply with DIN 12581. Water connectors with GL14 thread.

Effective length mm	Cone NS	Socket NS	PK	Art. no.
160	29/32	29/32	1	7.690 330
250	29/32	29/32	1	7.690 331
400	29/32	29/32	1	7.690 332



### CONDENSER ACC. TO DIMROTH, GLASS OLIVES, BOROSILICATE GLASS 3.3

Comply with DIN 12591. Water connectors with glass olives.

Effective length mm	Cone NS	Socket NS	PK	Art. no.
160	14/23	14/23	1	7.690 310
160	29/32	14/23	1	7.690 311
250	14/23	14/23	1	7.690 312
250	29/32	29/32	1	7.690 313
400	29/32	29/32	1	7.690 314



### CONDENSER ACC. TO DIMROTH, PP OLIVES, BOROSILICATE GLASS 3.3

Comply with DIN 12591. Water connectors with GL14 thread.

Effective length mm	Cone NS	Socket NS	PK	Art. no.
160	14/23	14/23	1	7.690 300
250	29/32	29/32	1	7.690 301
400	29/32	29/32	1	7.690 302

**CONDENSER ACC. TO DIMROTH FOR SOXHLET, PP OLIVES, BOROSILICATE GLASS 3.3**

The LABSOLUTE® Dimroth condenser for Soxhlet application comply with DIN 12591. Water connectors with GL14 thread.

For volume ml	Cone NS	PK	Art. no.
30	29/32	1	7.690 320
70	34/35	1	7.690 321
100	45/40	1	7.690 322



**CONDENSER ACC. TO LIEBIG, PP OLIVES, BOROSILICATE GLASS 3.3**

Comply with DIN 12576. Water connectors with GL14 thread.

Effective length mm	Cone NS	Socket NS	PK	Art. no.
160	14/23	14/23	1	7.690 350
250	29/32	29/32	1	7.690 351
400	29/32	29/32	1	7.690 352



**GL SCREW CAPS WITH OLIVE, PP**

The LABSOLUTE® GL14 screw caps with PP olive are a perfect, economic spare part for all LABSOLUTE® reflux condenser according to Allihn, Dimroth, and Liebig, that come with such a connection. Due to the additional silicone ring the connection is 100 % tight.

Description	PK	Art. no.
GL14, straight	2	7.690 390



## SEPARATING FUNNELS ACC. TO SQUIBB



The LABSOLUTE® separating funnels according to Squibb are made of high-quality borosilicate glass 3.3 and are therefore characterized by an extremely temperature-resistance up to 500 °C as well as a very good chemical resistance. The funnels are available with and without graduation. Production is compliant with DIN ISO 4800. They are sold including a PTFE stopcock and a PP stopper. The chemical resistance mainly depends on the resistance of the PP stopper.

## SEPARATING FUNNELS ACC. TO SQUIBB, BOROSILICATE GLASS 3.3

Capacity ml	Socket NS	Bore mm	PK	Art. no.
50	19/26	2.5	1	7.690 240
100	19/26	2.5	1	7.690 241
250	29/32	4.0	1	7.690 242
500	29/32	4.0	1	7.690 243
1000	29/32	6.0	1	7.690 244
2000	29/32	6.0	1	7.690 245



## SEPARATING FUNNELS ACC. TO SQUIBB, GRADUATED, BOROSILICATE GLASS 3.3

Graduation in white enamel colour.

Capacity ml	Socket NS	Bore mm	PK	Art. no.
50	19/26	2.5	1	7.690 230
100	19/26	2.5	1	7.690 231
250	29/32	4.0	1	7.690 232
500	29/32	4.0	1	7.690 233
1000	29/32	6.0	1	7.690 234
2000	29/32	6.0	1	7.690 235

## EXPANSION AND REDUCTION ADAPTERS, BOROSILICATE GLASS 3.3



The LABSOLUTE® expansion and reduction adapters are made of high-quality borosilicate glass 3.3. They are the perfect addition, if you want to expand a 14/23 to a 29/32 ground joint or reduce it visa versa.

Description	Socket NS	Cone NS	PK	Art. no.
Reduction adapter	14/23	29/32	1	7.690 225
Expansion adapter	29/32	14/23	1	7.690 226

## STOPPERS, HDPE

The white, octagonal LABSOLUTE® stoppers made of HDPE according to DIN 12254 are the perfect complement to the LABSOLUTE® volumetric flasks made of clear or amber glass and to all other laboratory glassware with a standard ground joint.

NS	PK	Art. no.
7/16	1	7.691 081
10/19	1	7.691 082
12/21	1	7.691 083
14/23	1	7.691 084
19/26	1	7.691 085
24/29	1	7.691 086
29/32	1	7.691 087
34/35*	1	7.691 088
45/40*	1	7.691 089
60/46*	1	7.691 090

\* In addition to the standard



## HOLLOW GLASS STOPPERS, TYPE C, BOROSILICATE GLASS 3.3

The LABSOLUTE® hexagonal hollow glass stoppers with standard ground joint and pointed bottom are made of high-quality borosilicate glass 3.3 and are therefore extremely temperature-resistant up to 500 °C. The stoppers comply with the DIN 12252 form C standard. They are resistant to cold lyes/alkaline solutions and strong acids with the exception of hydrofluoric acid and concentrated, hot phosphoric acid. The stoppers can be easily combined with all glass products that have a ground joint like measuring flasks, Erlenmeyer flasks, round bottom flasks, etc.

NS	PK	Art. no.
10/19	1	7.691 091
12/21	1	7.691 092
14/23	1	7.691 093
19/26	1	7.691 094
24/29	1	7.691 095
29/32	1	7.691 096



## EVAPORATING FLASKS, PEAR-SHAPED, BOROSILICATE GLASS 3.3

The LABSOLUTE® evaporating flasks are made of high-quality borosilicate glass 3.3. All flasks are characterized by very good chemical and temperature resistance. They are especially designed for the use with every common rotary evaporator.

Capacity ml	Flask Ø mm	Socket NS	PK	Art. no.
100	62	29/32	1	7.690 180
250	83	29/32	1	7.690 181
500	101	29/32	1	7.690 182
1000	128	29/32	1	7.690 183
2000	160	29/32	1	7.690 184



## CENTRIFUGE TUBES, PP

The LABSOLUTE® tubes have very good thermal, mechanical and chemical stability and are made of high-quality PP (equivalent to US pharmacopoeia USP Class VI). Caps are made of PE.

- Centrifugation: conical up to 16000 x g and with rim up to 3000 x g
- Free from DNase and RNase
- Endotoxin level: <0.5 EU/ml
- Sterile goods are gamma-sterilized (SAL 10<sup>-6</sup>)
- Available in bags or racks



Description	Capacity ml	Sterile	Ø mm	Height mm	PK	Art. no.
Conical, in bags	15	No	16	120	500	7.696 712
Conical, separate tubes and caps	15	No	16	120	500	7.696 713
Conical, in bags	15	Yes	16	120	500	7.696 714
Conical, in racks	15	Yes	16	120	500	7.696 715
Conical, in bags	50	No	28	115	500	7.696 717
Conical, separate tubes and caps	50	No	28	115	500	7.696 718
Conical, in bags	50	Yes	28	115	500	7.696 719
Conical, in racks	50	Yes	28	115	300	7.696 720
Self standing, in bags	50	No	28	115	500	7.696 722
Self standing, separate tubes and caps	50	No	28	115	500	7.696 723
Self standing, in bags	50	Yes	28	115	500	7.696 724



## CENTRIFUGE TUBES, AMBER, PP

The amber centrifuge tubes from LABSOLUTE® are ideal for light sensitive samples.

- Free from DNase and RNase
- Endotoxin level: <0.5 EU/ml
- Gammasterile (SAL 10<sup>-6</sup>)

Capacity ml	Ø mm	Height mm	PK	Art. no.
15	17	120	500	7.696 716
50	30	115	500	7.696 721



**QUALITATIVE FILTER PAPERS**

The qualitative filter papers are manufactured from pure cellulose with a proportion of alpha-cellulose of almost 100 %. The ash content is about 0.06 %.



**TECHNICAL DATA**

Grade	Description	Particle retention µm	Filtration velocity s*	Weight g/m <sup>2</sup>	Thickness mm
2005	Fast filtering	12–15	10	84	0.20
2010	Medium fast filtering	8–12	20	84	0.17
2015	Medium fast/slow filtering	5–8	50	87	0.16
2020	Medium fast/slow filtering	5–13	88	73	0.16
2025	Slow filtering	3–5	100	84	0.15
2030	Very slow filtering	2–3	180	84	0.14
2035	Very slow filtering	2	300	80	0.14

\* due to DIN 53137

**CIRCLES, QUALITATIVE, GRADE 2005,**



Ø mm	PK	Art. no.
42.5	100	7.697 990
55	100	7.697 991
70	100	7.697 992
90	100	7.697 993
110	100	7.697 994
125	100	7.697 995
150	100	7.697 996
185	100	7.697 997
210	100	7.697 998
240	100	7.697 999

**FOLDED FILTERS, QUALITATIVE, GRADE 2005**



Ø mm	PK	Art. no.
70	100	7.697 907
90	100	7.697 904
110	100	7.697 905
125	100	7.697 906
150	100	7.697 900
185	100	7.697 901
240	100	7.697 902
320	100	7.697 903

## CIRCLES, QUALITATIVE, GRADE 2010



Ø mm	PK	Art. no.
42.5	100	7.698 090
55	100	7.698 091
70	100	7.698 092
90	100	7.698 093
110	100	7.698 094
125	100	7.698 095
150	100	7.698 096
185	100	7.698 097
210	100	7.698 098
240	100	7.698 099

## FOLDED FILTERS, QUALITATIVE, GRADE 2010



Ø mm	PK	Art. no.
70	100	7.697 865
90	100	7.697 866
110	100	7.697 867
125	100	7.697 860
150	100	7.697 868
185	100	7.697 861
240	100	7.697 862
320	100	7.697 869
500	100	7.697 863
580 x 580	100	7.697 864

## CIRCLES, QUALITATIVE, GRADE 2015



Ø mm	PK	Art. no.
42.5	100	7.697 980
55	100	7.697 981
70	100	7.697 982
90	100	7.697 983
110	100	7.697 984
125	100	7.697 985
150	100	7.697 986
185	100	7.697 987
210	100	7.697 988
240	100	7.697 989

## FOLDED FILTERS, QUALITATIVE, GRADE 2015



$\emptyset$ mm	PK	Art. no.
70	100	7.697 899
90	100	7.697 870
110	100	7.697 871
125	100	7.697 872
150	100	7.697 873
185	100	7.697 874
240	100	7.697 875
270	100	7.697 876
320	100	7.697 877
385	100	7.697 878
500	100	7.697 879

## CIRCLES, QUALITATIVE, GRADE 2020



$\emptyset$ mm	PK	Art. no.
42.5	100	7.697 970
55	100	7.697 971
70	100	7.697 972
90	100	7.697 973
110	100	7.697 974
125	100	7.697 975
150	100	7.697 976
185	100	7.697 977
210	100	7.697 978
240	100	7.697 979

## FOLDED FILTERS, QUALITATIVE, GRADE 2020



$\emptyset$ mm	PK	Art. no.
70	100	7.697 880
90	100	7.697 889
110	100	7.697 881
125	100	7.697 882
150	100	7.697 883
185	100	7.697 884
240	100	7.697 885
270	100	7.697 886
320	100	7.697 887
385	100	7.697 888

## CIRCLES, QUALITATIVE, GRADE 2025



Ø mm	PK	Art. no.
42.5	100	7.697 960
55	100	7.697 961
70	100	7.697 962
90	100	7.697 963
110	100	7.697 964
125	100	7.697 965
150	100	7.697 966
185	100	7.697 967
210	100	7.697 968
240	100	7.697 969

## FOLDED FILTERS, QUALITATIVE, GRADE 2025



Ø mm	PK	Art. no.
70	100	7.698 040
90	100	7.698 041
110	100	7.698 042
125	100	7.698 043
150	100	7.698 044
185	100	7.697 853
240	100	7.697 854
320	100	7.698 045

## CIRCLES, QUALITATIVE, GRADE 2030



Ø mm	PK	Art. no.
42.5	100	7.697 950
55	100	7.697 951
70	100	7.697 952
90	100	7.697 953
110	100	7.697 954
125	100	7.697 955
150	100	7.697 956
185	100	7.697 957
210	100	7.697 958
240	100	7.697 959

## FOLDED FILTERS, QUALITATIVE, GRADE 2030



$\emptyset$ mm	PK	Art. no.
70	100	7.698 050
90	100	7.698 051
110	100	7.698 052
125	100	7.698 053
150	100	7.697 855
185	100	7.697 852
240	100	7.698 054
320	100	7.698 055

## CIRCLES, QUALITATIVE, GRADE 2035



$\emptyset$ mm	PK	Art. no.
42.5	100	7.699 010
55	100	7.699 011
70	100	7.699 012
90	100	7.699 013
110	100	7.699 014
125	100	7.699 015
150	100	7.699 016
185	100	7.699 017
210	100	7.699 018
240	100	7.699 019

## QUALITATIVE FILTER PAPERS, WET-STRENGTHENED

The wet-strengthened filter papers exhibit a very high degree of mechanical stability. They are resistant against acidic and alkaline solutions and are suitable for pressure and vacuum filtration. The qualitative filter papers are manufactured from pure cellulose with a proportion of alpha-cellulose of almost 100 %. The ash content is about 0.06 %.

### TECHNICAL DATA

Grade	Description	Particle retention µm	Filtration velocity s*	Weight g/m <sup>2</sup>	Thickness mm
2105	Fast filtering	12–15	10	84	0.20
2110	Medium fast filtering	17–30	22	73	0.17
2115	Medium fast/slow filtering	5–8	50	84	0.15
2130	Very slow filtering	2–3	180	84	0.14

\* due to DIN 53137

### CIRCLES, QUALITATIVE, WET STRENGTHENED, GRADE 2105



Ø mm	PK	Art. no.
42.5	100	7.699 040
55	100	7.699 041
70	100	7.699 042
90	100	7.699 043
110	100	7.699 044
125	100	7.699 045
150	100	7.699 046
185	100	7.699 047
210	100	7.699 048
240	100	7.699 049

### FOLDED FILTERS, QUALITATIVE, WET STRENGTHENED, GRADE 2105



Ø mm	PK	Art. no.
70	100	7.697 898
90	100	7.697 896
110	100	7.697 897
125	100	7.697 890
150	100	7.697 891
185	100	7.697 892
240	100	7.697 893
270	100	7.697 894
320	100	7.697 895

## CIRCLES, QUALITATIVE, WET STRENGTHENED, GRADE 2110



$\emptyset$ mm	PK	Art. no.
42.5	100	7.699 020
55	100	7.699 021
70	100	7.699 022
90	100	7.699 023
110	100	7.699 024
125	100	7.699 025
150	100	7.699 026
185	100	7.699 027
210	100	7.699 028
240	100	7.699 029

## FOLDED FILTERS, QUALITATIVE, WET STRENGTHENED, GRADE 2110



$\emptyset$ mm	PK	Art. no.
70	100	7.697 917
100	100	7.697 910
110	100	7.697 911
130	100	7.697 912
150	100	7.697 913
190	100	7.697 914
250	100	7.697 915
270	100	7.697 918
330	100	7.697 916

## CIRCLES, QUALITATIVE, WET STRENGTHENED, GRADE 2115



$\emptyset$ mm	PK	Art. no.
42.5	100	7.698 020
55	100	7.698 021
70	100	7.698 022
90	100	7.698 023
110	100	7.698 024
125	100	7.698 025
150	100	7.698 026
185	100	7.698 027
210	100	7.698 028
240	100	7.698 029

## FOLDED FILTERS, QUALITATIVE, WET STRENGTHENED, GRADE 2115



$\emptyset$ mm	PK	Art. no.
70	100	7.698 060
90	100	7.698 061
110	100	7.698 062
125	100	7.698 063
150	100	7.698 064
185	100	7.698 065
240	100	7.698 066
270	100	7.698 067
320	100	7.698 068

## CIRCLES, QUALITATIVE, WET STRENGTHENED, GRADE 2130



$\emptyset$ mm	PK	Art. no.
42.5	100	7.698 000
55	100	7.698 001
70	100	7.698 002
90	100	7.698 003
110	100	7.698 004
125	100	7.698 005
150	100	7.698 006
185	100	7.698 007
210	100	7.698 008
240	100	7.698 009



**QUANTITATIVE FILTER PAPERS, ASHLESS**

The filter papers for quantitative analyses are made of 100 % cotton linters. For maximum purity the papers are acid-washed and cleaned with demineralized water. Ash content is 0.007 %.



**TECHNICAL DATA**

Grade	Colour code	Description	Particle retention µm	Filtration velocity s*	Weight g/m <sup>2</sup>	Thickness mm
1005	Black ribbon	Fast filtering	12–15	10	84	0.18
1010	White ribbon	Medium fast filtering	8–12	20	84	0.17
1015	Red ribbon	Medium fast/slow filtering	5–8	50	84	0.16
1020	Green ribbon	Slow filtering	3–5	100	84	0.15
1025	Blue ribbon	Very slow filtering	2–3	180	84	0.14

\* due to DIN 53137

**CIRCLES, QUANTITATIVE, BLACK RIBBON EQUIVALENT, GRADE 1005**



Ø mm	PK	Art. no.
42.5	100	7.697 827
55	100	7.697 828
70	100	7.697 820
90	100	7.697 821
110	100	7.697 822
125	100	7.697 823
150	100	7.697 824
185	100	7.697 825
210	100	7.699 050
240	100	7.697 826

**CIRCLES, QUANTITATIVE, WHITE RIBBON EQUIVALENT, GRADE 1010**



Ø mm	PK	Art. no.
42.5	100	7.697 840
55	100	7.697 841
70	100	7.697 842
90	100	7.697 843
110	100	7.697 844
125	100	7.697 845
150	100	7.697 846
185	100	7.697 847
210	100	7.697 848
240	100	7.697 849

## CIRCLES, QUANTITATIVE, RED RIBBON EQUIVALENT, GRADE 1015



Ø mm	PK	Art. no.
42.5	100	7.697 818
55	100	7.697 810
70	100	7.697 811
90	100	7.697 812
110	100	7.697 813
125	100	7.697 814
150	100	7.697 815
185	100	7.697 816
210	100	7.699 051
240	100	7.697 817

## CIRCLES, QUANTITATIVE, GREEN RIBBON EQUIVALENT, GRADE 1020



Ø mm	PK	Art. no.
42.5	100	7.697 830
55	100	7.697 831
70	100	7.697 832
90	100	7.697 833
110	100	7.697 834
125	100	7.697 835
150	100	7.697 836
185	100	7.697 837
210	100	7.697 838
240	100	7.697 839

## CIRCLES, QUANTITATIVE, BLUE RIBBON EQUIVALENT, GRADE 1025



Ø mm	PK	Art. no.
42.5	100	7.697 808
55	100	7.697 809
70	100	7.697 800
90	100	7.697 801
110	100	7.697 802
125	100	7.697 803
150	100	7.697 804
185	100	7.697 805
210	100	7.699 052
320	100	7.697 807
240	100	7.697 806

## QUANTITATIVE FILTER PAPERS, ASHLESS, WET-STRENGTHENED

The wet-strengthened filter papers exhibit a very high degree of mechanical stability. They are resistant against acidic and alkaline solutions and are suitable for pressure and vacuum filtration. They are made of 100 % cotton linters. For maximum purity the papers are acid-washed and cleaned with demineralized water. Ash content is 0.007 %.

### TECHNICAL DATA

Grade	Description	Particle retention µm	Filtration velocity s*	Weight g/m <sup>2</sup>	Thickness mm
1105	Fast filtering	12–15	10	84	0.18
1110	Medium fast filtering	8–12	20	84	0.17
1115	Medium fast/slow filtering	5–8	50	84	0.16
1125	Very slow filtering	2,5	180	84	0.15

\* due to DIN 53137

### CIRCLES, QUANTITATIVE, WET STRENGTHENED, GRADE 1105



Ø mm	PK	Art. no.
42.5	100	7.697 940
55	100	7.697 941
70	100	7.697 942
90	100	7.697 943
110	100	7.697 944
125	100	7.697 945
150	100	7.697 946
185	100	7.697 947

### CIRCLES, QUANTITATIVE, WET STRENGTHENED, GRADE 1110



Ø mm	PK	Art. no.
42.5	100	7.697 930
55	100	7.697 931
70	100	7.697 932
90	100	7.697 933
110	100	7.697 934
125	100	7.697 935
150	100	7.697 936
185	100	7.697 937

## CIRCLES, QUANTITATIVE, WET-STRENGTHENED, GRADE 1115



Ø mm	PK	Art. no.
42.5	100	7.699 030
55	100	7.699 031
70	100	7.699 032
90	100	7.699 033
110	100	7.699 034
125	100	7.699 035
150	100	7.699 036
185	100	7.699 037

## CIRCLES, QUANTITATIVE, WET STRENGTHENED, GRADE 1125



Ø mm	PK	Art. no.
42.5	100	7.697 921
55	100	7.697 922
70	100	7.697 923
90	100	7.697 924
110	100	7.697 926
125	100	7.697 927
150	100	7.697 928
185	100	7.697 929

## EXTRACTION THIMBLES, CELLULOSE

The LABSOLUTE® extraction thimbles are made of 100 % cellulose. They have a high mechanical stability and are free from binders. The extraction thimbles have a wall thickness of about 1 mm and a pore size of approximately 5 µm. They are perfect for all kind of Soxhlet extractions as well as for the separation of liquid and solid particles out of air and gases.

Int. diam. mm	Length mm	PK	Art. no.
22	80	25	7.699 210
30	80	25	7.699 211
33	80	25	7.699 212
33	94	25	7.699 213



## MICRO GLASS FIBRE FILTERS

The glass fibre filters from LABSOLUTE® are made of borosilicate glass without binder and are thus biologically inert. The filters provide a high retention power and simultaneously enable elevated flow rates, which makes them applicable for almost every area of laboratory filtration. Among other things, they are used for clarification of protein solutions, air or water monitoring and for gravimetric and waste water analyses. Furthermore, they can be ideally used as prefilters for membranes.

- Very high resistance to almost all kinds of chemicals
- Temperature-resistant up to 500 °C
- Autoclavable



## MICRO GLASS FIBRE FILTERS, SLOW FILTERING

- Particle retention: 0.7 µm
- Thickness: 0.45 mm
- Weight: 75 g/m<sup>2</sup>

Ø mm	PK	Art. no.
25	100	7.699 900
47	100	7.699 901
70	50	7.699 902
90	25	7.699 903
110	25	7.699 904

## MICRO GLASS FIBRE FILTERS, MEDIUM FAST FILTERING

- Particle retention: 1.2 µm
- Thickness: 0.26 mm
- Weight: 53 g/m<sup>2</sup>

Ø mm	PK	Art. no.
25	100	7.699 905
47	100	7.699 906
70	100	7.699 907
90	100	7.699 908
110	100	7.699 909
102 x 254	50	7.699 910

## MICRO GLASS FIBRE FILTERS, FAST FILTERING

- Particle retention: 1.6 µm
- Thickness: 0.26 mm
- Weight: 52 g/m<sup>2</sup>

Ø mm	PK	Art. no.
25	100	7.699 911
47	100	7.699 912
70	100	7.699 913
90	100	7.699 914
110	100	7.699 915
125	100	7.699 916
150	100	7.699 917

## MEMBRANE FILTERS

LABSOLUTE® offers a wide selection of membrane filters for microfiltration. You can choose between several membrane materials, diameters and pore sizes. Usage of membrane filters is recommended both for filtration of air and fluid and is optimally suited in particular for retention of very small particles. Precisely defined micro pores and exceeding stability - this combination makes it a good choice for applications in the microbiological sector, as well as in the pharmaceutical, food and water analysis industry.



## CELLULOSE ACETATE MEMBRANE FILTERS, WHITE

Cellulose acetate membranes are characterized by an extraordinary high flow capacity and dimensional stability. The filters have good thermal resistance and can be used in various applications.

- Hydrophilic
- Low protein binding capacity
- Maximum operating temperature: 135 °C
- Non-sterile
- Autoclavable

Ø mm	Pore size µm	PK	Art. no.
47	0.22	100	7.699 920
50	0.22	100	7.699 921
142	0.22	25	7.699 922
47	0.45	100	7.699 925
50	0.45	100	7.699 926
142	0.45	25	7.699 927

## NITROCELLULOSE MEMBRANE FILTERS

The uniform pore structure of the nitrocellulose membranes allow high throughput and diffusion rates and guarantee ultrapure and consistent results due to a very low extent of extractables.

- Hydrophilic
- High protein binding capacity
- Maximum operating temperature: 180 °C
- Autoclavable

### NITROCELLULOSE MEMBRANE FILTERS, WHITE

- Non-sterile

Ø mm	Pore size µm	PK	Art. no.
25	0.45	100	7.699 930
47	0.45	100	7.699 931
50	0.45	100	7.699 932
142	0.45	25	7.699 933
47	0.80	100	7.699 934
50	0.80	100	7.699 935
47	1.20	100	7.699 936
50	1.20	100	7.699 937
47	8.00	100	7.699 938
50	8.00	100	7.699 939

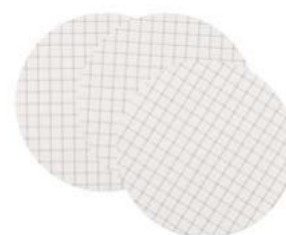
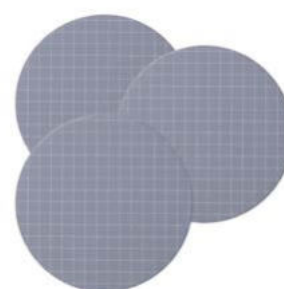


### NITROCELLULOSE MEMBRANE FILTERS, GRID PATTERN

Membranes featuring a grid pattern are ideally suited for determination of colony count, particle analysis and microscopy. Differently coloured filters guarantee a best possible contrast and easy colony counting.

- Sterile and non-sterile

Ø mm	Pore size µm	Sterile	Membrane colour	PK	Art. no.
47	0.45	Yes	Black, white grid	100	7.699 940
50	0.45	Yes	Black, white grid	100	7.699 941
50	0.45	No	Black, white grid	100	7.699 942
47	0.45	Yes	White, black grid	200	7.699 945
50	0.45	Yes	White, black grid	100	7.699 946



## REGENERATED CELLULOSE MEMBRANE FILTERS, WHITE



Filters made of regenerated cellulose membrane provide excellent resistance to almost all kinds of organic solvents and high temperatures.

- Hydrophilic
- Low protein binding capacity
- Maximum operating temperature: 134 °C
- Non-sterile
- Autoclavable

Ø mm	Pore size µm	PK	Art. no.
47	0.22	100	7.699 950
47	0.45	100	7.699 951

## POLYCARBONATE TRACK ETCHED (PCTE) MEMBRANE FILTERS, WHITE



PCTE membrane filters are produced in a two-step manufacturing process which complies with high quality standards. The membrane consists of a thin PC film with precisely defined pores ensuring ultrapure and consistent filtration results.

- Hydrophilic
- Low protein binding capacity
- Maximum operating temperature: 140 °C
- Non-sterile
- Autoclavable

Ø mm	Pore size µm	PK	Art. no.
25	0.45	100	7.699 955
47	0.45	100	7.699 956



## SYRINGE FILTERS

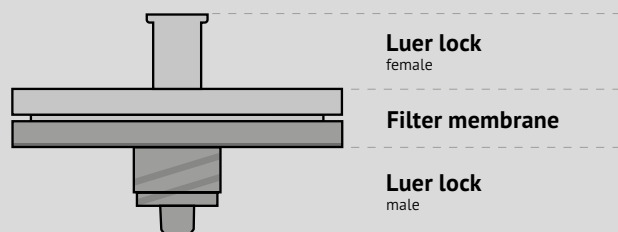
LABSOLUTE® offers a comprehensive range of syringe filters that have been developed especially for the efficient filtration of aqueous and organic solutions and for ventilation. The choice of different housing diameters, membrane types and pore sizes offers the ideal solution for your applications. Intensive quality checks ensure consistently high quality, both of the membrane material and the filter unit as a whole, for all of the filters we supply.

- Made without the use of adhesives: the housing and membrane are welded
- Sterile versions: 100 % sterility thanks to gamma radiation
- Equipped with Luer connections
- The filters are printed, both with the membrane type and the pore size, excluding the possibility of confusion

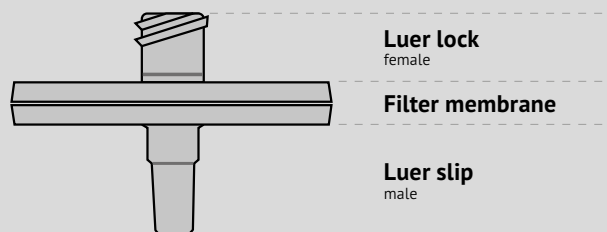
### SETUP

The syringe filters have either acrylic or PP housing. Both housing versions have Luer connections, and the membrane is secured in the housing so that the sample fluid cannot flow around the membrane.

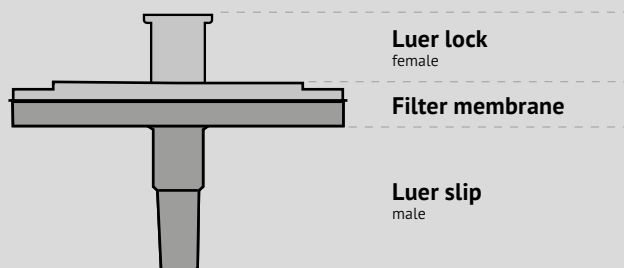
#### Acrylic housing



#### PP housing

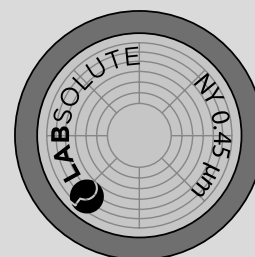


#### PRO Fill (PP housing)



### LABELLING

The membrane type and pore size are printed on the packaging and also on each individual filter in order to avoid mistakes, even if the filters are no longer in their original packaging.



## SYRINGE FILTERS, 13 MM

LABSOLUTE® syringe filters with a filter membrane diameter of 13 mm are ideal for the preparation of small-volume samples in which a very small dead volume is particularly important. The non-sterile filters are packed in quantities of 500 in PP pouches, while sterile filters are packaged individually in blisters in quantities of 50 per box. Acrylic housing.



- Membrane diameter: 13 mm
- Filtering surface: 0.6 cm<sup>2</sup>
- Housing diameter: 18 mm
- Pressure rating: 5.0 bar
- Luer connections: female Luer lock, male Luer lock

Filter material	Sterile	Pore size µm	Colour	PK	Art. no.
Cellulose acetate (CA)	No	0.22	Blue	500	7.699 800
Cellulose acetate (CA)	No	0.45	Yellow	500	7.699 801
Cellulose acetate (CA)	Yes	0.22	Blue	50	7.699 802
Cellulose acetate (CA)	Yes	0.45	Yellow	50	7.699 803

## SYRINGE FILTERS, PROFILL, 17 MM

The colour-coded ring enables easy identification of the filter's membrane type. Furthermore, membrane type and pore size are printed onto the PE bag in which the filters are tamper-proof evidently packed with 100 pieces each. An additional blue reclosable PP box offers further protection for the filters during transportation. PP housing.



- Membrane diameter: 17 mm
- Filtering surface: 1.33 cm<sup>2</sup>
- Housing diameter: 22.3 mm
- Pressure rating: 7.9 bar
- Luer connections: female Luer lock, male Luer slip

Filter material	Pore size µm	Colour	PK	Art. no.
Nylon (PA)	0.20	Purple	100	7.629 086
Nylon (PA)	0.45	Green	100	7.670 320
Polytetrafluoroethylene (PTFE)	0.20	Blue	100	7.629 127
Polytetrafluoroethylene (PTFE)	0.45	Yellow	100	7.656 547
Regenerated cellulose (RC)	0.20	Grey	100	7.636 877
Regenerated cellulose (RC)	0.45	Brown	100	7.629 480
Glass fibre prefilter/polyvinylidene difluoride (PVDF)	0.45	Red	100	7.629 934

SYRINGE FILTERS, 25 MM

LABSOLUTE® syringe filters with a filter membrane diameter of 25 mm are ideal for the preparation of samples with a volume ranging from 1.5 ml to 100 ml. The non-sterile filters are packed in quantities of 500 in PP pouches, while sterile filters are packaged individually in blisters in quantities of 50 per box.

- Housing diameter: 33 mm
- Membrane diameter: 25 mm
- Filtering surface: 4.6 cm<sup>2</sup>
- Pressure rating: 5.0 bar
- Luer connections: acrylic housing with female Luer lock and male Luer lock; PP housing with female Luer lock and male Luer slip

Filter material	Housing	Sterile	Pore size µm	Colour	PK	Art. no.
Cellulose acetate (CA)	Acrylic	No	0.22	Blue	500	7.699 820
Cellulose acetate (CA)	Acrylic	No	0.45	Yellow	500	7.699 821
Cellulose acetate (CA)	Acrylic	Yes	0.22	Blue	50	7.699 822
Cellulose acetate (CA)	Acrylic	Yes	0.45	Yellow	50	7.699 823
Nylon (NY)	PP	No	0.20	Transparent	500	7.699 814
Nylon (NY)	PP	No	0.45	Transparent	500	7.699 815
Polyethersulfone (PES)	PP	No	0.22	Transparent	500	7.699 818
Polyethersulfone (PES)	PP	No	0.45	Transparent	500	7.699 819
Polyvinylidene difluoride (PVDF)	PP	No	0.22	Transparent	500	7.699 816
Polyvinylidene difluoride (PVDF)	PP	No	0.45	Transparent	500	7.699 817
Polytetrafluoroethylene (PTFE)	PP	No	0.20	Transparent	500	7.699 810
Polytetrafluoroethylene (PTFE)	PP	No	0.45	Transparent	500	7.699 811
Regenerated cellulose (RC)	PP	No	0.20	Transparent	500	7.699 812
Regenerated cellulose (RC)	PP	No	0.45	Transparent	500	7.699 813



## SYRINGE FILTERS WITH AND WITHOUT GLASS FIBRE PREFILTERS, PROFILL, 30 MM

The colour-coded ring enables easy identification of the filter's membrane type. Furthermore, membrane type and pore size are printed onto the PE bag in which the filters are tamper-proof evidently packed with 100 pieces each. An additional blue reclosable PP box offers further protection for the filters during transportation. PP housing.



- Membrane diameter: 30 mm
- Filtering surface: 4.91 cm<sup>2</sup>
- Housing diameter: 35.6 mm
- Pressure rating: 6.2 bar
- Luer connections: female Luer lock, male Luer slip

Filter material	Pore size µm	Colour	PK	Art. no.
Glass fibre prefilter/nylon (PA)	0.20	Purple	100	7.638 848
Glass fibre prefilter/polytetrafluoroethylene (PTFE)	0.20	Blue	100	6.239 018
Glass fibre prefilter/polytetrafluoroethylene (PTFE)	0.45	Yellow	100	7.638 421
Glass fibre prefilter/regenerated cellulose (RC)	0.20	Grey	100	7.629 428
Regenerated cellulose (RC)	0.45	Brown	100	7.629 128
Polyvinylidene difluoride (PVDF)	0.45	Red	100	7.629 935
Glass fibre prefilter/GL microfibre	1.20	Orange	100	7.671 876

## FILTER FLASKS, WITH GLASS OLIVE, BOROSILICATE GLASS 3.3

The LABSOLUTE® Erlenmeyer shaped filter flasks with glass olive made of high-quality borosilicate glass 3.3 comply with the ISO 6556 and DIN 12476 standards. Together with the LABSOLUTE® Buchner funnels and suitable rubber gaskets, they form a perfect unit for almost all kinds of filtration applications in chemical labs. All LABSOLUTE® filter flasks are autoclavable and, because of their high wall thickness, also vacuum-proof.

We recommend a vacuum tube with an inner diameter of 8 mm to connect the filter flasks to a vacuum pump.

**Due to the glass olive, the flasks do not comply with the requirements of the German product safety law (ProdSG).**



Capacity ml	Neck Ø mm	Height mm	PK	Art. no.
100	17	107	1	7.690 200
250	28	158	1	7.690 201
500	34	188	1	7.690 202
1000	37	242	1	7.690 203
2000	41	288	1	7.690 204

## RUBBER GASKETS

Conical LABSOLUTE® gaskets made of grey natural rubber are the best sealing between a filter flask and a Buchner funnel. The gaskets are available in eight different sizes with a bottom diameter between 12 mm and 66 mm or in a useful assortment.

## RUBBER GASKETS

Description	Top Ø mm	Bottom Ø mm	Height mm	Wall thickness mm	PK	Art. no.
Size 1	21	12.0	18	2.5	1	7.690 091
Size 2	27	17.0	20	3.0	1	7.690 092
Size 3	33	21.0	24	3.0	1	7.690 093
Size 4	41	27.5	27	4.0	1	7.690 094
Size 5	53	33.0	34	5.0	1	7.690 095
Size 6	68	48.0	35	5.5	1	7.690 096
Size 7	78	58.0	35	6.0	1	7.690 097
Size 8	89	66.0	40	6.5	1	7.690 098



## RUBBER GASKET ASSORTMENT

The assortment consists of one gasket each with the following lower diameters: 12, 17, 21, 27.5, 33, 48, 58 and 66 mm.

Description	PK	Art. no.
Rubber gasket assortment	1	7.690 099



## BUCHNER FUNNELS, PORCELAIN

The LABSOLUTE® Buchner funnels are made of high-quality porcelain and comply with DIN 12905. They are glazed on the inside and outside and are characterized by an excellent resistance to lyes and acids with the exception of hydrofluoric acid.

Int. Ø mm	Filter Ø mm	PK	Art. no.
48	45	1	7.694 954
62	55	1	7.694 955
77	70	1	7.694 956
97	90	1	7.694 957
116	110	1	7.694 958
130	125	1	7.694 959
156	150	1	7.694 960
192	180	1	7.694 961
248	240	1	7.694 962
296	270	1	7.694 963
334	320	1	7.694 964







**COOLING  
TECHNOLOGY**

## CRYO TUBES

Cryo tubes from LABSOLUTE® are designed for the optimized storage and preservation of biological sample materials in the gas phase of liquid nitrogen or in deep-freeze devices. The cryo tubes are produced under clean room conditions as defined by ISO 14644-1 Class 7 and US FED STD 209E Class 10.000 from high-quality PP.

The screw caps made of HDPE with integrated sealing surface are innovative and especially practical. Leaks from the cryo tubes are therefore 100 % guaranteed not to happen - incorrectly positioned O-rings are a thing of the past.

The CE-certified cryo tubes are available in various sizes and versions, allowing you to choose between round and flat bases and between inner and outer threads, depending on your needs.

- Certified sterility through beta irradiation
- Free from human DNA, RNase, DNase, ATP and pyrogens
- Large labelling field
- Simple removal and secure storage: supplied in a handy dispenser box with 10 resealable pouches of 50 cryo tubes



## PRODUCT PROPERTIES



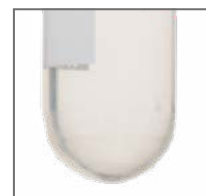
Internal thread



External thread



Self-standing



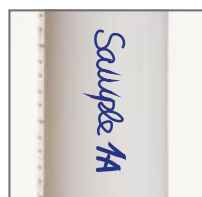
Round bottom



Graduation



Barcode for  
unique  
identification



Large  
labelling field



Dispenser box



## CRYO TUBES

Capacity ml	Description	Thread	Height mm	Ø mm	PK	Art. no.
1.2	Self-standing	External	4.02	14.10	500	7.696 650
1.2	Self-standing	Internal	4.27	12.60	500	7.696 651
2.0	Self-standing	External	4.56	14.10	500	7.696 652
2.0	Self-standing	Internal	4.82	12.60	500	7.696 653
2.0	Round bottom	External	4.45	14.10	500	7.696 657
2.0	Round bottom	Internal	4.70	12.60	500	7.696 658
4.0	Self-standing	External	7.36	14.10	500	7.696 654
5.0	Self-standing	External	8.76	14.10	500	7.696 655



## 2D CRYO TUBES

A 2D data matrix, which corresponds with the linear barcode on the vessel side, is integrated in the vessel bottom of the tubes. The dual identification enables secure tracking and facilitates handling of large numbers of samples. Tubes lock in cryo boxes and cryo racks.

Capacity ml	Thread	Height mm	Ø mm	PK	Art. no.
2.0	Internal	4.82	12.60	500	7.696 800
2.0	External	4.56	14.10	500	7.696 801
5.0	Internal	9.03	12.60	500	7.696 802
5.0	External	8.76	14.10	500	7.696 803



## COLOURED CAP INSERTS

LABSOLUTE® cap inserts are very easy to insert into the screw caps and are used to colour-code your samples. Available in six different colours.

Colour	PK	Art. no.
Blue	100	7.696 644
White	100	7.696 645
Yellow	100	7.696 646
Purple	100	7.696 647
Red	100	7.696 648
Green	100	7.696 649



## CRYO BOXES, CARDBOARD

The LABSOLUTE® cryo boxes are made of cold-resistant cardboard and well suited for cryogenic temperatures.

- Temperature-resistant up to -80 °C
- Lid included
- Delivery without grid insert

## CRYO BOXES, STANDARD

The standard cryo boxes have a water repellent finish.



Width mm	Depth mm	Int. height mm	PK	Art. no.
67	134	50	10	7.696 670
136	136	50	10	7.696 671
136	136	100	10	7.696 672
133	133	50	10	7.696 675
133	133	75	10	7.696 676
133	133	100	10	7.696 677

## CRYO BOXES, PLASTIC COATED

Due to a water-proof plastic coating these cryo boxes are especially durable.



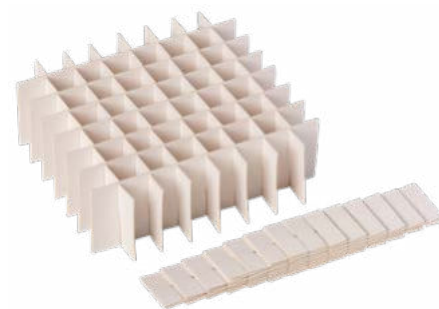
Width mm	Depth mm	Int. height mm	Colour	PK	Art. no.
133	133	32	White	1	7.696 820
133	133	50	White	1	7.696 821
133	133	50	Yellow	1	7.696 822
133	133	50	Green	1	7.696 823
133	133	75	White	1	7.696 824
133	133	100	White	1	7.696 825
136	136	32	White	1	7.696 830
136	136	50	White	1	7.696 831
136	136	50	Yellow	1	7.696 832
136	136	50	Green	1	7.696 833
136	136	75	White	1	7.696 834
136	136	100	White	1	7.696 835

## GRID INSERTS FOR CRYO BOXES

Multiple formats and heights allow to combine individually.

The inserts are characterized by their freezing-resistant, water-repellent texture.

Array	For cryo box dimensions mm	Tube Ø mm	Height mm	PK	Art. no.
10 x 5	134 x 67	11.0	30	10	7.696 687
8 x 4	134 x 67	14.5	30	10	7.696 680
8 x 8	136 x 136	14.5	30	10	7.696 681
9 x 9	136 x 136	14.2	30	10	7.696 682
10 x 10	136 x 136	11.0	30	10	7.696 683
8 x 8	136 x 136	14.5	40	10	7.696 684
9 x 9	136 x 136	14.2	40	10	7.696 685
10 x 10	136 x 136	11.0	40	10	7.696 686
8 x 8	133 x 133	14.0	30	10	7.696 688
9 x 9	133 x 133	11.5	30	10	7.696 689
10 x 10	133 x 133	10.5	30	10	7.696 690
8 x 8	133 x 133	14.0	40	10	7.696 691
9 x 9	133 x 133	11.5	40	10	7.696 692
10 x 10	133 x 133	10.5	40	10	7.696 693

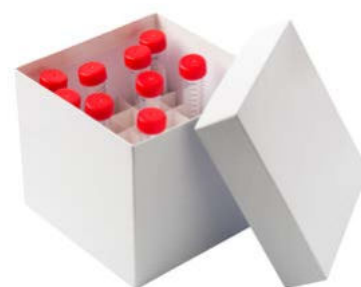


## CRYO BOXES FOR 50 ML AND 15 ML CENTRIFUGE TUBES

The white cryo boxes from LABSOLUTE® are made of water-repellent and freezing-resistant cardboard and suitable for sample storage up to -80 °C.

- Suitable for 50 ml and 15 ml centrifuge tubes, respectively
- Temperature-resistant up to -80 °C
- Lid and grid insert included
- Dimensions (W x H x D): 148 x 130 x 148 mm

Array	Tube Ø mm	PK	Art. no.
4 x 4	30.0	5	7.696 678
6 x 6	17.0	5	7.696 679



## CRYO BOXES, PC

LABSOLUTE® stackable cryo boxes in various designs, colours and sizes offer a handy and space-saving system for storing samples.

- Made of high-quality PC, suitable for temperatures between -196 °C and 121 °C
- Autoclavable at 121 °C for 20 minutes
- Stackable, lids and inserts at the top with 45°-angled corners for easier closing
- Transparent lid with white grid sectioning and numbering
- Various versions, sizes and colours available



For tubes ml	No. of tubes	Colour	Width mm	Height mm	Depth mm	PK	Art. no.
1.2/2.0	25	Blue	76	52	76	1	7.696 619
1.2/2.0	25	Red	76	52	76	1	7.696 620
1.2/2.0	25	Green	76	52	76	1	7.696 621
1.2/2.0	81	Blue	132	52	132	1	7.696 622
1.2/2.0	81	Red	132	52	132	1	7.696 623
1.2/2.0	81	Green	132	52	132	1	7.696 624
4.0/5.0	81	Blue	132	94	132	1	7.696 625
4.0/5.0	81	Red	132	94	132	1	7.696 626
4.0/5.0	81	Green	132	94	132	1	7.696 627
1.2/2.0*	100	Blue	132	52	132	1	7.696 634
1.2/2.0*	100	Red	132	52	132	1	7.696 635
1.2/2.0*	100	Green	132	52	132	1	7.696 636

\* Only for tubes with internal thread

## CRYO BOXES FOR 2D CRYO TUBES, PC

The boxes are designed for storage of 2D cryo tubes. Holes in the bottom allow scanning entire racks without taking tubes out of the box. A linear barcode on the side and a 2D data matrix on the bottom ensure an unambiguous assignment of each box and each tube.

- Boxes are made of PC and are suitable for temperatures between -196 °C and 121 °C
- Transparent lids with numbered grid allow quick and easy identification of samples



For tubes ml	No. of tubes	Colour	Width mm	Height mm	Depth mm	PK	Art. no.
2.0	81	Blue	132	50	132	1	7.696 810
2.0	81	Yellow	132	50	132	1	7.696 811
2.0	81	Red	132	50	132	1	7.696 812
2.0	81	Green	132	50	132	1	7.696 813
2.0*	100	White	132	50	132	1	7.696 818
5.0	81	Blue	132	94	132	1	7.696 814
5.0	81	Yellow	132	94	132	1	7.696 815
5.0	81	Red	132	94	132	1	7.696 816
5.0	81	Green	132	94	132	1	7.696 817
5.0*	100	White	132	94	132	1	7.696 819

\* Only for tubes with internal thread

### CRYO BOXES FOR 5 ML MICRO TUBES, PC

The LABSOLTUE® cryo box is especially suitable for the storage of 5 ml reaction vessels. The box is made of high quality PC and provides room for 25 tubes.

- Suitable for temperatures between -196 °C and 121 °C
- With black numbering of places



Description	PK	Art. no.
For 5 ml micro tubes	4	7.696 643

### NUMBERING CARDS

Thanks to the useful numbering cards made of cardboard, you will never lose track of your samples. Each storing position is marked by a number and can thus be easily identified. Just place the numbering card on the bottom of the cryo box, partition insert on top (9 x 9 or 10 x 10), and your samples are clearly arranged. Fits in each cryo box with the dimensions (W x D) 133 x 133 mm or 136 x 136 mm.

Description	For grid insert	Positions	PK	Art. no.
Numbering cards	9 x 9	81	10	7.696 696
Numbering cards	10 x 10	100	10	7.696 697



### CRYO LABELS

With the help of the different coloured LABSOLUTE® cryo labels, you can clearly mark your cryo boxes. At the same time, you can use the generous labelling field for writing on your boxes. Every packing unit includes 50 labels in five different colours: red, yellow, green, blue and violet.

- Temperature-resistant up to -150 °C on cryo boxes made of cardboard
- Delivery includes one permanent marker

Description	W x H mm	PK	Art. no.
Cryo labels	200 x 40	50	7.696 695



## CRYO RACKS

Simple and useful: the LABSOLUTE® cryo racks permit one-handed opening and secure screw closure of tubes. This means that contamination can effectively be avoided.



- Dimensions (W x H x D): 215 x 25 x 100 mm
- Available in three different colours
- With rubber feet for secure stand

Colour	PK	Art. no.
Blue	1	7.696 637
Red	1	7.696 638
Green	1	7.696 639

## MINI COOLERS

The LABSOLUTE® mini coolers offer effective cooling of reagents and solutions. Mini coolers can be used very conveniently directly on your workbench and convince with a controllable cooling process and reproducible results.

### MINI COOLER 0 °C, PC

The red LABSOLUTE® mini cooler 0 °C made of robust PC is filled with a non-toxic cooling gel. Pre-cool for at least 24 hours at -5 °C to -10 °C before use.



- Maintains the temperature of 0 °C for at least 2 hours
- Suitable for 15 ml centrifuge tubes

Description	PK	Art. no.
For 12 tubes	1	7.696 220

### MINI COOLERS -20 °C, PC

The yellow LABSOLUTE® mini coolers -20 °C made of robust PC are filled with a non-toxic cooling gel. Pre-cool for at least 24 hours at -20 °C to -25 °C before use.

- Maintains the temperature of -20 °C for at least 1 hour
- Suitable for micro tubes and cryo tubes



Description	Array	PK	Art. no.
For 0.5 - 1.5 ml micro tubes and cryo tubes	12	1	7.696 221
For 0.5 - 2 ml micro tubes and cryo tubes	20	1	7.696 222
For 5 ml micro tubes	12	1	7.696 219

## FREEZING EQUIPMENT

LABSOLUTE® offers two effective options for cryopreservation. On the one hand, the LABSOLUTE® Precision Freeze ensures an even, particularly gentle freezing process while, on the other, LABSOLUTE® Quick Freeze ensures that samples are frozen quickly.

### PRECISION FREEZE

Protection against freezing too quickly: the LABSOLUTE® Precision Freeze, made of PC and filled with 100 % isopropyl alcohol, guarantees a slow, reproducible freezing process of  $-1\text{ }^{\circ}\text{C}/\text{min}$ . The samples are protected against contact with the isopropyl alcohol thanks to the internal tube holders made of HDPE, and even the labelling of the samples remains undamaged. For thawing, the handy tube holder can also be used as a floating stand in the water bath when thawing the samples.

- Constant cooling rate of  $-1\text{ }^{\circ}\text{C}/\text{min}$
- Stackable container with foam inlay
- Suitable for cryo tubes of sizes 1.2 ml to 2.0 ml
- Housing made of PC
- Lid and tube holder made of HDPE

Description	PK	Art. no.
For 18 tubes	1	7.696 223

### QUICK FREEZE, PC

A handy alternative to the dry ice solvent bath: the LABSOLUTE® Quick Freeze was developed for the rapid cooling of samples - 1.5 ml H<sub>2</sub>O, for example, needs only around 3 minutes to be cooled to  $0\text{ }^{\circ}\text{C}$ . Pre-cool for at least 24 hours at max.  $-80\text{ }^{\circ}\text{C}$  before use.

- Rapid and controlled cooling of samples
- Suitable for test tubes and cryo tubes of sizes 0.5 ml to 2.0 ml
- Housing and lid made of PC
- Filled with non-toxic insulation solution

Description	PK	Art. no.
For 12 tubes*	1	7.696 224

\* Delivery includes 12 adapters for converting the 1.5 ml hole to 0.5 ml tubes

IDEAL FOR  
FREEZING  
CELLS



## ICE BUCKETS, PUR



The red LABSOLUTE® ice buckets are made of polyurethane foam and ideal for the cooling of samples, solutions or cultures. The ice buckets have excellent insulating properties and are suitable for use with dry ice, water ice, brine and acetone.

- Extremely robust and light
- With lid

Capacity l	Width mm	Height mm	Depth mm	PK	Art. no.
2.5	283	130	283	1	7.696 225
4.5	280	185	280	1	7.696 226

## COOLING PACK, REUSABLE



Th. Geyer's reusable cooling packs are very handy due to their dimensions (W x H x D) of only 168 x 24 x 85 mm and their weight of 260 g. Cooling packs can be used for all laboratory and transport applications. Packs are delivered filled and welded. Therefore, they can be used several times. The cooling packs can be ordered piecewise or in cartons of 50 pieces for larger requirements.

Description	PK	Art. no.
Cooling pack, reusable	1	7.696 210



**LIQUID  
HANDLING**



## MEASURING AND MIXING CYLINDERS, BOROSILICATE GLASS 3.3

All LABSOLUTE® measuring and mixing cylinders made of borosilicate glass 3.3 comply with DIN EN ISO 4788. They are calibrated to "In" (20 °C) and have a solid hexagonal glass base for a secure stand.

### MEASURING CYLINDERS, HIGH FORM, CLASS A, BLUE GRADUATION

With functional spout and batch number. A batch-specific certificate of conformity is available on request.



Capacity ml	Grad. ml	Tolerance ± ml	Height mm	PK	Art. no.
5	0.1	0.05	115	1	7.691 000
10	0.2	0.1	135	1	7.691 001
25	0.5	0.25	160	1	7.691 002
50	1	0.5	195	1	7.691 003
100	1	0.5	240	1	7.691 004
250	2	1.0	320	1	7.691 005
500	5	2.5	380	1	7.691 006
1000	10	5.0	465	1	7.691 007
2000	20	10.0	565	1	7.691 008

### MEASURING CYLINDERS, HIGH FORM, CLASS B, WHITE GRADUATION

With functional spout.



Capacity ml	Grad. ml	Tolerance ± ml	Height mm	PK	Art. no.
5	0.1	0.1	115	1	7.691 160
10	0.2	0.2	140	1	7.691 161
25	0.5	0.5	170	1	7.691 162
50	1	1	200	1	7.691 163
100	1	1	260	1	7.691 164
250	2	2	335	1	7.691 165
500	5	5	390	1	7.691 166
1000	10	10	470	1	7.691 167
2000	20	20	570	1	7.691 168



Accuracy classes and error limits please see page 140

## MEASURING CYLINDERS, LOW FORM, CLASS B, AMBER GRADUATION

With functional spout.

Capacity ml	Grad. ml	Tolerance ± ml	Height mm	PK	Art. no.
10	1	0.3	97	1	7.691 010
25	1	0.5	120	1	7.691 011
50	1	1.0	145	1	7.691 012
100	2	1.0	165	1	7.691 013
250	5	2.0	215	1	7.691 014
500	10	5.0	250	1	7.691 015
1000	20	10.0	290	1	7.691 016
2000	50	20.0	340	1	7.691 017



## MEASURING CYLINDERS, PP & PMP

All LABSOLUTE® measuring cylinders made of PP or fully transparent PMP comply with DIN 12681 & ISO 6706 standards. They are calibrated to "In" (20 °C), have a solid hexagonal base for a secure stand, an embossed scale, as well as a functional spout.

## MEASURING CYLINDERS, HIGH FORM, CLASS A, PMP

Dishwasher-proof and autoclavable. A batch-specific certificate of conformity is available on request.

Autoclaving at 121 °C according to DIN EN ISO 285 will not cause permanent exceeding of the tolerance limits of class A. Cleaning at max. 60 °C and the use of soft cleaning agents is recommended to preserve the embossed scale.

Capacity ml	Grad. ml	Tolerance ± ml	Height mm	PK	Art. no.
25	0.25	0.25	170	1	7.693 110
50	0.5	0.5	200	1	7.693 111
100	0.5	0.5	250	1	7.693 112
250	1	1	325	1	7.693 113
500	2.5	2.5	388	1	7.693 114
1000	5	5	459	1	7.693 115
2000	10	10	533	1	7.693 116





## MEASURING CYLINDERS, HIGH FORM, CLASS B, PP

Capacity ml	Grad. ml	Tolerance ± ml	Height mm	PK	Art. no.
10	0.2	0.2	147	1	7.693 100
25	0.5	0.5	170	1	7.693 101
50	1	1	200	1	7.693 102
100	1	1	250	1	7.693 103
250	2	2	327	1	7.693 104
500	5	5	389	1	7.693 105
1000	10	10	458	1	7.693 106
2000	20	20	534	1	7.693 107

## MEASURING AND MIXING CYLINDERS, BOROSILICATE GLASS 3.3

All LABSOLUTE® measuring and mixing cylinders made of borosilicate glass 3.3 comply with DIN EN ISO 4788. They are calibrated to "In" (20 °C) and have a solid hexagonal glass base for a secure stand.



## MIXING CYLINDERS, CLASS A, WITH PP STOPPER, BLUE GRADUATION

With standard ground joint and batch number. Delivered with a suitable PP stopper. A batch-specific certificate of conformity is available on request.

Capacity ml	Grad. ml	Standard ground joint NS*	Height mm	PK	Art. no.
10	0.1	10/19	137	1	7.691 120
25	0.2	14/23	167	1	7.691 121
50	1.0	19/26	195	1	7.691 122
100	1.0	24/29	257	1	7.691 123
250	2.0	29/32	330	1	7.691 124
500	5.0	34/35	385	1	7.691 125
1000	10.0	45/40	460	1	7.691 126
2000	20.0	45/40	565	1	7.691 127

\* The first figure relates to the upper diameter of the standard ground joint, while the second figure specifies its length



Accuracy classes and error limits please see page 140

## VOLUMETRIC FLASKS

All LABSOLUTE® clear and amber volumetric flasks with accuracy class A comply with the DIN EN ISO 1042 standard. They are made of high-quality borosilicate glass 3.3 and calibrated to "In" (20 °C). All volumetric flasks are supplied with suitable stoppers made of glass or PE. A batch-specific certificate of conformity can be supplied on request.

### VOLUMETRIC FLASKS, CLASS A, WITH PE STOPPER, BLUE GRADUATION

Capacity ml	Standard ground joint NS*	Tolerance ± ml	PK	Art. no.
5	7/16	0.025	1	7.691 036
5	10/19	0.040	1	7.691 020
10	7/16	0.025	1	7.691 033
10	10/19	0.040	1	7.691 021
20	10/19	0.040	1	7.691 022
20	12/21	0.060	1	7.691 034
25	10/19	0.040	1	7.691 023
25	12/21	0.060	1	7.691 035
50	12/21	0.060	1	7.691 024
50	14/23	0.100	1	7.691 025
100	12/21	0.100	1	7.691 026
100	14/23	0.100	1	7.691 027
200	14/23	0.150	1	7.691 028
250	14/23	0.150	1	7.691 029
500	19/26	0.250	1	7.691 030
1000	24/29	0.400	1	7.691 031
1000	29/32	0.600	1	7.691 037
2000	29/32	0.600	1	7.691 032

\* The first figure relates to the upper diameter of the standard ground joint, while the second figure specifies its length



### VOLUMETRIC FLASKS, CLASS A, WITH HOLLOW GLASS STOPPER, BLUE GRADUATION

Capacity ml	Standard ground joint NS*	Tolerance ± ml	PK	Art. no.
5	10/19	0.040	1	7.691 100
10	10/19	0.040	1	7.691 101
20	10/19	0.040	1	7.691 102
25	10/19	0.040	1	7.691 103
50	14/23	0.100	1	7.691 104
100	14/23	0.100	1	7.691 105
200	14/23	0.150	1	7.691 106
250	14/23	0.150	1	7.691 107
500	19/26	0.250	1	7.691 108
1000	24/29	0.400	1	7.691 109
2000	29/32	0.600	1	7.691 110

\* The first figure relates to the upper diameter of the standard ground joint, while the second figure specifies its length





## VOLUMETRIC FLASKS, AMBER, CLASS A, WITH PE STOPPER, WHITE GRADUATION

Especially used for light-sensitive samples.

Capacity ml	Standard ground joint NS*	Tolerance ± ml	PK	Art. no.
5	10/19	0.040	2	7.691 070
10	10/19	0.040	2	7.691 071
20	10/19	0.040	2	7.691 072
25	10/19	0.040	2	7.691 073
50	14/23	0.100	2	7.691 074
100	14/23	0.100	2	7.691 075
200	14/23	0.150	2	7.691 076
250	14/23	0.150	2	7.691 077
500	19/26	0.250	2	7.691 078
1000	24/29	0.400	2	7.691 079
2000	29/32	0.600	1	7.691 080

\* The first figure relates to the upper diameter of the standard ground joint, while the second figure specifies its length



## VOLUMETRIC FLASKS, TRAPEZOIDAL, CLASS A, WITH PE STOPPER, BLUE GRADUATION

Capacity ml	Standard ground joint NS*	Tolerance ± ml	PK	Art. no.
1	7/16	0.025	1	7.691 130
2	7/16	0.025	1	7.691 131
5	10/19	0.04	1	7.691 132
10	10/19	0.04	1	7.691 133
20	10/19	0.04	1	7.691 134
25	10/19	0.04	1	7.691 135
50	12/21	0.06	1	7.691 136

\* The first figure relates to the upper diameter of the standard ground joint, while the second figure specifies its length



LABSOLUTE® stoppers please see page 77

## GRADUATED AND VOLUMETRIC PIPETTES

The LABSOLUTE® graduated and volumetric pipettes are made of soda-lime glass and have a batch identification. A batch-specific certificate of conformity is available on request.

### Calibration

The graduated and volumetric pipettes are calibrated to "Ex" (+5 seconds) so that the draining volume of liquid corresponds to the printed volume specification after five seconds.

### Accuracy class AS

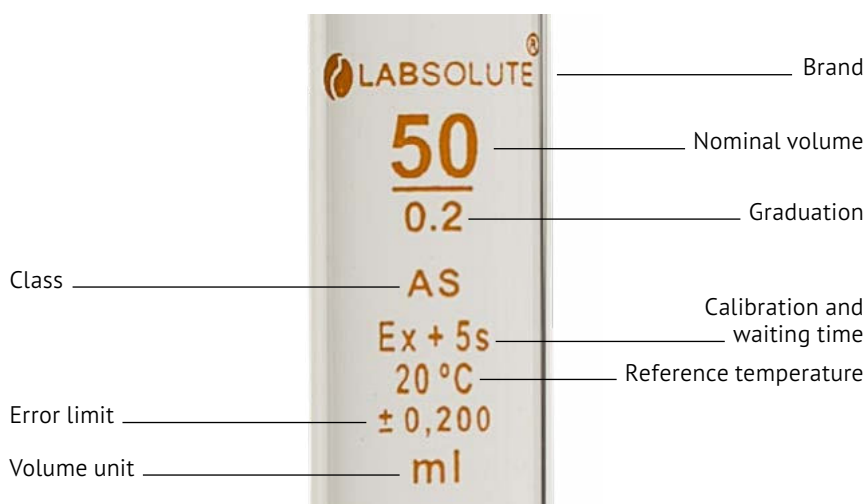
All LABSOLUTE® graduated and volumetric pipettes satisfy the criteria of the highest accuracy class A. The tolerance lies within the standard defined for class A.

The suffix "S" means rapid draining. The draining time is between 5 and 20 seconds, depending on the nominal volume, as opposed to 10 to 60 seconds with class A.

### Durable labelling

All information is imprinted in brown diffusion dye. This dye is burned into the surface of the glass and can only be destroyed by glass erosion. The labelling is therefore unaffected by chemicals and cleaning agents.

## IDENTIFICATION OF LABSOLUTE® GRADUATED AND VOLUMETRIC PIPETTES





## VOLUMETRIC PIPETTES, CLASS AS, 1 MARK, AMBER GRADUATION

According to DIN EN ISO 648.

Volume ml	Length mm	Colour code	PK	Art. no.
1	350	Blue	6	7.691 040
2	330	Orange	6	7.691 041
3*	360	Black	6	7.691 042
4*	360	Red stripes	6	7.691 048
5	400	White	6	7.691 043
10	440	Red	6	7.691 044
15*	455	Green	3	7.691 049
20	510	Yellow	3	7.691 045
25	520	Blue	3	7.691 046
50	540	Red	3	7.691 047
100	585	Yellow	3	7.691 057

\* 3, 4 and 15 ml in addition to DIN EN ISO 648

## GRADUATED PIPETTES, CLASS AS, TYPE 3, AMBER GRADUATION

According to DIN EN ISO 835.

Capacity ml	Length mm	Colour code	Graduation ml	PK	Art. no.
1	360	Yellow	0.01	6	7.691 050
2	360	Black	0.02	6	7.691 051
5	360	Red	0.05	6	7.691 052
10	360	Orange	0.10	6	7.691 053
20	360	Yellow stripes	0.10	3	7.691 054
25	450	White	0.10	3	7.691 055
50	450	Black	0.20	3	7.691 056



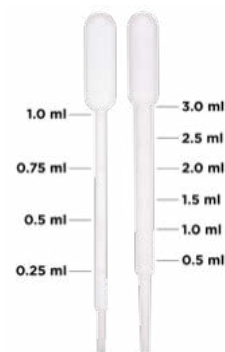
Accuracy classes and error limits please see page 140



## PASTEUR PIPETTES, LDPE

LABSOLUTE® Pasteur pipettes guarantee a comfortable and safe handling of fluids. Due to the constant drop volume the transfer pipettes are perfectly suited to aliquot larger volumes of liquids. The soft suction ball and precisely finished tip guarantee pleasant, clean working.

- Made from transparent LDPE
- Suitable for food analyses
- Free of BSE



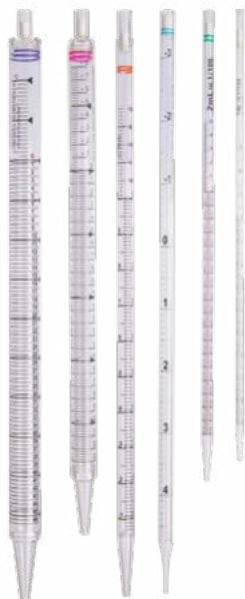
Capacity ml	Sterile	Package	Length mm	Grad. ml	Drop volume ml	PK	Art. no.
1	No	Bulk	154	0,25	0.040	500	7.691 200
1	Yes	Individually, blistered	154	0,25	0.040	500	7.691 201
1	Yes	Packed per 10 pcs., blistered	154	0,25	0.040	500	7.691 206
3	No	Bulk	154	0,5	0.040	500	7.691 202
3	Yes	Individually, blistered	154	0,5	0.040	500	7.691 203
3	Yes	Packed per 10 pcs., blistered	154	0,5	0.040	500	7.691 207
10	No	Bulk	170	-	0.056	200	7.691 204
10	No	Bulk	300	-	0.045	100	7.691 205

## PASTEUR PIPETTES, SODA-LIME GLASS

LABSOLUTE® Pasteur pipettes, made of soda-lime glass with elongated, fine tips, are designed for single use. There is a narrowing at the end of the approximately 20 mm long suction tube that guarantees secure positioning of a cotton wool ball. The pipettes have a volume of about 2 ml independent of their length.

Length mm	Capillary-Ø mm	Outer suction tube-Ø mm	Pack size pieces	PK	Art. no.
150	1.1	7.1	4 x 250	1000	7.691 060
230	1.1	7.1	4 x 250	1000	7.691 061





## SEROLOGICAL PIPETTES, STERILE, PS

The serological pipettes from LABSOLUTE® are ideal for working with sterile solutions in the millilitre range and applications in cell culture. Manufactured from crystal clear PS, serological pipettes are individually packaged in an easy-to-open paper/plastic blister.

- Free of DNase, RNase and pyrogens
- Non-cytotoxic
- Quick and easy identification by colour coding
- Gamma sterilized (SAL 10<sup>-6</sup>)

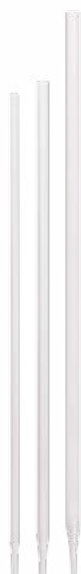
Capacity ml	Grad. ml	Colour	Negative grad. ml	PK	Art. no.
1	1/100	Yellow	0.3	500	7.695 550
2	1/50	Green	0.6	500	7.695 551
5	1/10	Blue	3	200	7.695 552
10	1/10	Orange	3	200	7.695 553
25	2/10	Red	8	150	7.695 554
50	5/10	Purple	10	100	7.695 555



## SEROLOGICAL PIPETTES, SHORT VERSION, STERILE, PS

The short version of the serological pipettes from LABSOLUTE® is with 23.5 cm significantly shorter than the normal pipette. It is specially designed for liquid handling operation in limited working space and enables a comfortable and safe working. They are available in three different volumes: 5 ml, 10 ml and 25 ml.

Capacity ml	Grad. ml	Colour	Negative grad. ml	PK	Art. no.
5	1/10	Blue	3	200	7.695 556
10	2/10	Orange	10	150	7.695 557
25	5/10	Red	9	100	7.695 558



## ASPIRATING PIPETTES, PS, STERILE

Aspirating pipettes from LABSOLUTE® are sterile, ungraduated and unplugged pipettes for aspirating liquid using vacuum suction.

- Gamma sterile
- Single packed

Capacity ml	PK	Art. no.
1	500	7.695 559
2	500	7.695 560
5	200	7.695 561
25	150	7.695 562

## SAFETY PIPETTE FILLERS, NATURAL RUBBER

The red LABSOLUTE® safety pipette fillers Flip, Standard and Universal, made of natural rubber are the perfect complement for the LABSOLUTE® graduated and volumetric pipettes as well as all other graduated, volumetric and serological pipettes.

Especially the Flip with its integrated automatic valve and only two operating points is very easy to handle.



Description	PK	Art. no.
Universal	1	7.691 068
Standard	1	7.691 069
Flip	1	7.691 067

## PIPETTE STAND, VERTICAL, 94 POSITIONS

The vertical, turnable LABSOLUTE® pipette stand made of PP with 94 positions of different sizes is the best choice for space-saving and secure storage of your LABSOLUTE® graduated and volumetric pipettes. The pipette stand is autoclavable at 121 °C and has a solid base and an additional rotating plate to protect the pipette tips.

Description	PK	Art. no.
Pipette stand, vertical, 94 positions	1	7.695 718



## PIPETTE STAND

Use the LABSOLUTE® pipette stand as a laboratory helper to store your pipettes securely and, at the same time, have them easily to hand. Size or model differences are immaterial with this concept.

- Convenient storage of up to eight single or multichannel pipettes
- Easy to clean
- Non-rotatable

Description	PK	Art. no.
Pipette stand	1	7.695 717





## PIPETTE STAND WITH DUAL BINS FOR PIPETTE TIPS

This acrylic LABSOLUTE® pipette rack keeps your pipettes and tips together in one convenient stand. You can store up to four pipettes within the provided openings. The dual reservoirs offer space for different sizes of pipette tips which you can easily access even while wearing gloves. The transparent lid allows for dust-free storage of your tips. Universally compatible with different pipette models.

- Dimensions (W x H x D): 244 x 246 x 165 mm

Description	PK	Art. no.
Pipette stand	1	7.695 716

## REAGENT RESERVOIRS, PS

The white LABSOLUTE® solution reservoirs made of PS for multichannel pipettes offer several advantages. The bottom features a narrow trough to aid full sample recovery. The inside walls have graduation marks which enable you to determine the fluid level. Furthermore, the basins have thicker walls and thus are very stable. A special shaping prevents the reservoirs from sticking together. Last but not least, the spouts guarantee a safe transfer of fluid.

- Dimensions (W x H x D): 145 x 25 x 85 mm
- Non-sterile



Capacity ml	Dimensions W x H x D mm	PK	Art. no.
55	140 x 24 x 61	100	7.695 725
100	143 x 32 x 83	100	7.695 726

## PIPETTE CONTROLLER

Pipetting made easy – the wireless LABSOLUTE® Pipette assistant ensures comfortable working with glass and plastic pipettes (0.1 – 100 ml).

- Effortless pipetting thanks to the ergonomic grip and smooth-running buttons – simple operation with one hand
- High working speed: a 25 ml pipette is filled in less than four seconds
- Extremely quiet and powerful motor with three speed settings
- The charging device prevents overloading or heating of the battery
- Exchangeable membrane filters protect the device mechanism against contamination
- Differently coloured autoclavable cones allow customization

The supplied package includes charger, batteries, desktop stand, wall mount bracket and two spare membrane filters (PTFE 0.2 µm, PTFE 0.45 µm). Further you will receive three differently coloured pipette holder cones (blue, green and orange). Accessoires can be ordered separately if required.



Description	PK	Art. no.
Pipette controller with accessories	1	7.696 030
PTFE membrane filter 0.2 µm	5	7.696 031
PTFE membrane filter 0.45 µm	5	7.696 032
Silicone adapter with safety valve	1	7.696 033
Spare charger	1	7.696 035
Spare batteries	2	7.696 036
Pipette holder cone, red	1	7.696 037
Pipette holder cone, blue	1	7.696 038
Pipette holder cone, green	1	7.696 039
Pipette holder cone, black	1	7.696 034
Pipette holder cone, orange	1	7.696 040

## MICROLITRE PIPETTES

Ergonomical and lightweight: our range of microlitre pipettes offers models in various volumes with one, eight and twelve channels. The pipettes boast extreme precision and accuracy whilst being superbly convenient. They are perfectly suitable for long-term use in all laboratory applications and facilitate fatigue-free working. The calibration tool included in the scope of delivery allows you to carry out recalibration very easily yourself.

### **Double volume adjustment**

To adjust the volume, you can use the push button or the thumbwheel. This makes the adjustment process especially comfortable for you.

### **Soft-spring system**

Easy-running, soft pipetting minimizes the exertion required and adds comfort to your everyday laboratory practices.

### **Easy-to-read volume display**

The display has a vertical structure. As a result, you do not have to rotate the pipette to read off the set volume - an additional comfort feature that makes your work easier.

### **Colour coding**

To ensure you recognize the pipette's volume range directly, the push buttons are colour-coded.

### **High-quality materials**

- Stable shaft
- UV-resistant
- Autoclavable



## SINGLE-CHANNEL PIPETTES

User-friendliness and superlative quality make the LABSOLUTE® single-channel pipettes the perfect instrument for your laboratory. The colour coding on the push button allows the volume range of the pipettes to be recognized at a glance.

### Easy personalization

The pack contains seven coloured rings (in red, white, yellow, black, pink, violet and green). These allow you to mark the pipette and thereby visually assign them at a glance.

### Stable shaft

The high-quality material ensures particular stability and longevity for the pipettes, even in high-use situations.

### Contamination-free working

The pipettes in the larger volume range (7.695 706 and 7.695 707) have an exchangeable sterile filter in the shaft which protects against cross-contamination and must be removed before autoclaving. All other models are fully autoclavable.

Volume range µl	Colour code	Grad. µl	PK	Art. no.
0.1 - 2	White	0.002	1	7.695 700
0.5 - 10	White	0.02	1	7.695 701
2 - 20	Yellow	0.02	1	7.695 702
10 - 100	Yellow	0.2	1	7.695 703
20 - 200	Yellow	0.2	1	7.695 704
100 - 1000	Blue	2.0	1	7.695 705
500 - 5000	White	10	1	7.695 706
1000 - 10000	White	20	1	7.695 707



## ACCESSORIES FOR SINGLE-CHANNEL PIPETTES

Description	PK	Art. no.
Shaft filters for 7.695 706 and 7.695 707	10	7.695 719

## SINGLE-CHANNEL PIPETTE STARTER SETS

With our starter sets, we offer you a handy, inexpensive and uniform all-in-one solution. The sets contain three pipettes each and a rack of pipette tips for each pipette size contained in the set.

Description	Pipette with volume range µl	PK	Art. no.
Starter set 1	0.1 - 2, 0.5 - 10 and 10 - 100	3	7.695 720
Starter set 2	0.5 - 10, 10 - 100 and 100 - 1000	3	7.695 721
Starter set 3	2 - 20, 20 - 200 and 100 - 1000	3	7.695 722

## MULTICHANNEL PIPETTES

LABSOLUTE® offers both eight-channel and twelve-channel pipettes with different volume ranges. As with the single-channel pipettes, the colour codes on the push button help you to quickly and reliably recognize the volume ranges at a glance.

### Revolutionary spring system

The individual shafts can glide back separately as soon as they are pressed against a pipette tip. This ensures that each pipette tip is firmly and tightly attached.

### Innovative ejection mechanism

The ejection is designed so that the tips can be taken off in stages. This reduces the amount of force required considerably - providing tangible comfort in daily use.

### Individual 360° adjustment

The pipetting unit can be rotated around 360°, allowing optimized and comfortable working.



## EIGHT-CHANNEL PIPETTES

Volume range µl	Colour code	Grad. µl	PK	Art. no.
5 - 50	Yellow	0.1	1	7.695 710
20 - 200	Yellow	0.2	1	7.695 711
50 - 300	White	1.0	1	7.695 712

## TWELVE-CHANNEL PIPETTES

Volume range µl	Colour code	Grad. µl	PK	Art. no.
5 - 50	Yellow	0.1	1	7.695 713
20 - 200	Yellow	0.2	1	7.695 714
50 - 300	White	1.0	1	7.695 715





## PIPETTE TIPS

LABSOLUTE® offers a complete assortment for your pipetting tasks – no matter whether packed in bags, within racks or within our efficient refill system: all pipette tips are part of a system in which the components can be replaced. The pipette tips are made of pure PP and comply with the requirements of EN ISO 8655.

In combination with the LABSOLUTE® pipettes, they constitute the perfect pipetting unit. Thanks to their universal fit and the high-quality material, the tips guarantee a firm and absolutely tight hold on diverse pipette models. And all this with much less attachment and ejection forces. The fully automated production and packaging of the pipette tips under clean room conditions guarantee completely contamination-free working conditions with products which are certified free of DNase, RNase, human DNA, pyrogens and ATP – to ensure you reproducible and consistent results.

- High quality standard
- Graduated tips: the volume is visible at first glance
- 200 µl and 1000 µl tips are available in yellow or blue, respectively
- Autoclavable

**Our pipette tips boxes offer you the best conditions for comfortable and efficient pipetting:**

- Simple-to-use closure for single-handed opening
- The transparent design provides a complete overview of your tips
- Coloured trays enable you to recognize the volume at first glance
- Refill system: easy and fast removal and replacement of the trays
- Stackable boxes for space-saving and safe storage
- Autoclavable



## PIPETTE TIPS WITHOUT AEROSOL BARRIER IN BAGS, NON-STERILE

Delivered in resealable bags, your pipette tips are stored safely and dust-free.

Volume range µl	Figure	Colour	Overall length mm	Grad. µl	PK	Art. no.
0,1 - 10	1	Transparent	31	2, 10	1000	7.695 840
0,1 - 10 XL/20*	2	Transparent	44	1, 5, 10, 20	1000	7.695 841
2 - 200 (Spitze abgeschrägt**)	3	Transparent	51	-	1000	7.695 842
2 - 200 (Spitze abgeschrägt**)	4	Yellow	51	-	1000	7.695 843
2 - 200	5	Transparent	53	10, 50, 100	1000	7.695 844
2 - 200	6	Yellow	53	10, 50, 100	1000	7.695 845
20 - 300	7	Transparent	55	50, 100, 200	1000	7.695 846
100 - 1000	8	Transparent	71	100, 500	500	7.695 847
100 - 1.000	9	Blue	71	100, 500	500	7.695 848
100 - 1250	10	Transparent	76	-	500	7.695 849
100 - 1250 XL	11	Transparent	98	200, 500, 1000	500	7.695 854
500 - 5000, Eppendorf Fit	12	Transparent	120	1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000	250	7.695 850
500 - 5000, Gilson Fit	13	Transparent	120	1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000	250	7.695 933
500 - 5000, Thermo Fit***	14	Transparent	147	-	250	7.695 855
1000 - 10000, Eppendorf/Gilson Fit	15	Transparent	160	1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 5500, 6000, 6500, 7000, 7500, 8000, 8500, 9000, 9500, 10000	200	7.695 934
1000 - 10000, Eppendorf Fit	16	Transparent	165	1000, 5000, 10000	100	7.695 851

## PIPETTE TIPS WITHOUT AEROSOL BARRIER IN RACKS, NON-STERILE

Delivered in stackable and stable racks.

Volume range µl	Figure	Colour	Overall length mm	Grad. µl	Pack size pieces	PK	Art. no.
0.1 - 10	1	Transparent	31	2, 10	10 x 96	960	7.695 860
0.1 - 10 XL/20*	2	Transparent	44	1, 5, 10, 20	10 x 96	960	7.695 861
2 - 200	5	Transparent	53	10, 50, 100	10 x 96	960	7.695 862
2 - 200	6	Yellow	53	10, 50, 100	10 x 96	960	7.695 863
20 - 300	7	Transparent	55	50, 100, 200	10 x 96	960	7.695 864
100 - 1000	8	Transparent	71	100, 500	10 x 96	960	7.695 865
100 - 1000	9	Blue	71	100, 500	10 x 96	960	7.695 866
100 - 1250	10	Transparent	76	-	10 x 96	960	7.695 867
100 - 1250 XL	11	Transparent	98	200, 500, 1000	10 x 96	960	7.695 868

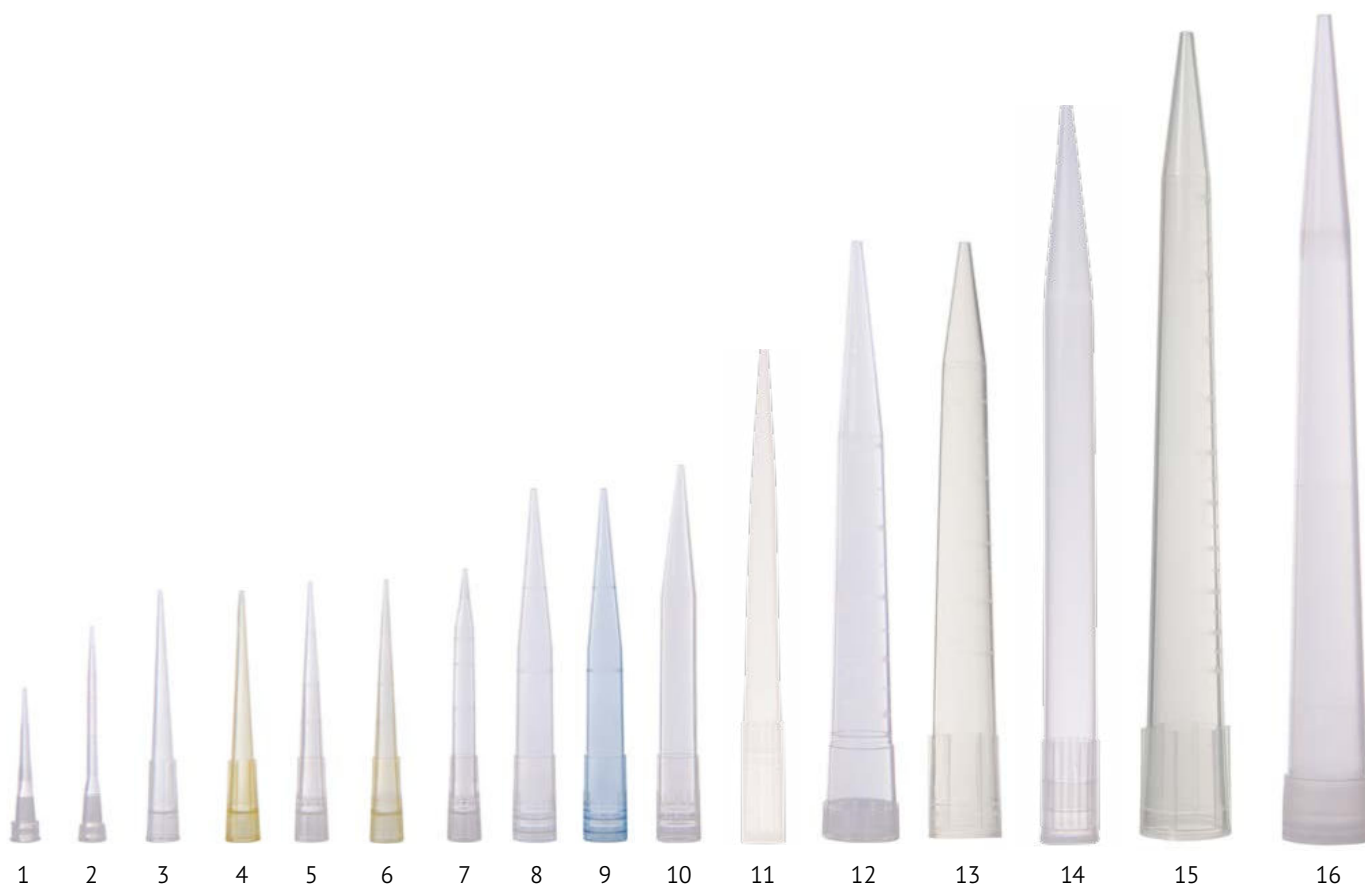
PIPETTE TIPS WITHOUT AEROSOL BARRIER IN RACKS, STERILE

Delivered in stackable and stable racks.

Volume range µl	Figure	Colour	Overall length mm	Grad. µl	Pack size pieces	PK	Art. no.
0.1 - 10	1	Transparent	31	2, 10	10 x 96	960	7.695 870
0.1 - 10 XL/20*	2	Transparent	44	1, 5, 10, 20	10 x 96	960	7.695 871
2 - 200	5	Transparent	53	10, 50, 100	10 x 96	960	7.695 872
2 - 200	6	Yellow	53	10, 50, 100	10 x 96	960	7.695 873
20 - 300	7	Transparent	55	50, 100, 200	10 x 96	960	7.695 874
100 - 1000	8	Transparent	71	100, 500	10 x 96	960	7.695 875
100 - 1000	9	Blue	71	100, 500	10 x 96	960	7.695 876
100 - 1250	10	Transparent	76	-	10 x 96	960	7.695 877
100 - 1250 XL	11	Transparent	98	200, 500, 1000	10 x 96	960	7.695 878



- \* Compatible with 20 µl Eppendorf Reference® and Eppendorf Research® Plus
- \*\* Due to the bevelled end the contact surface of the pipetted liquid is reduced, and the pipetting accuracy increases
- \*\*\* Compatible with 5 ml Finnpiettes™ from Thermo Fisher Scientific and Transferpettes from Brand



## PIPETTE TIPS WITH AEROSOL BARRIER IN RACKS, STERILE

Our filter tips offer dual protection! The fine-pored filter made of PE serves as a defence to protect your samples from aerosols and biomolecules. At the same time, the hydrophobic material prevents your pipette from contamination. Delivered in stackable and stable racks.

Volume range µl	Figure	Colour	Overall length mm	Grad. µl	Pack size pieces	PK	Art. no.
0.1–10	17	Transparent	31	2, 10	10 x 96	960	7.695 880
0.1–10 XL/20*	18	Transparent	44	1, 5, 10, 20	10 x 96	960	7.695 881
0.5–20	19	Transparent	53	10, 50, 100	10 x 96	960	7.695 882
2–100	20	Transparent	55	10, 50, 100, 200	10 x 96	960	7.695 883
2–200	21	Transparent	55	10, 50, 100, 200	10 x 96	960	7.695 884
20–300	22	Transparent	55	50, 100, 200	10 x 96	960	7.695 885
100–1000	23	Transparent	76	-	10 x 96	960	7.695 886
100–1250 XL	24	Transparent	98	200, 500, 1000	10 x 96	960	7.695 887

\* Compatible with 20 µl Eppendorf Reference® and Eppendorf Research® Plus



Tips are shown in original size

## REFILL SYSTEMS, PIPETTE TIPS WITHOUT AEROSOL BARRIER, NON-STERILE

This efficient refill systems help you to preserve the environment and the budget! All pipette tip boxes provide trays which can be easily replaced and directly indicate the respective volume due to their colour. To safely store the pipette tips, the refill systems are delivered in the form of two individually shrink-wrapped towers. The outer packaging made of cardboard additionally guarantees that your pipette tips remain dust-free. Last but not least, with each refill system, you will get **two refillable pipette tip boxes for free!**

Volume range µl	Figure	Colour	Overall length mm	Grad. µl	Pack size pieces	PK	Art. no.
0.1–10	1	Transparent	31	2, 10	10 x 96	960	7.695 890
0.1–10 XL/20*	2	Transparent	44	1, 5, 10, 20	10 x 96	960	7.695 891
2–200	5	Transparent	53	10, 50, 100	10 x 96	960	7.695 892
20–300	7	Transparent	55	50, 100, 200	10 x 96	960	7.695 893
100 - 1000	8	Transparent	71	10 x 96	960	7.695 894	

\* Compatible with 20 µl Eppendorf Reference® and Eppendorf Research® Plus

## PIPETTE TIPS BOXES

Would you like to replace your boxes? That's not a problem with our refillable pipette tips boxes. The unfilled trays hold up to 96 tips and are coloured differently according to the volume of the appropriate tips. The trays can be replaced easily as it is the case for all of our pipette tips boxes.

Description	Suitable for	PK	Art. no.
Pipette tips boxes	10 µl, 10 µl XL/20 µl*	10	7.695 897
Pipette tips boxes	20 µl - 300 µl*	10	7.695 898
Pipette tips boxes	1000 µl, 1250 µl*	10	7.695 899

\* LABSOLUTE® pipette tips (7.695 840 - 7.695 894)



## RACKS FOR 5 ML AND 10 ML PIPETTE TIPS

The boxes made of PP offer space for 18 pieces of 5 ml or 10 ml pipette tips from LABSOLUTE®, respectively. Tips are not included.



Suitable for	Height Box mm	Ø mm	PK	Art. no.
5 ml pipette tips*	188	102	2	7.695 852
10 ml pipette tips**	188	102	2	7.695 853

\* 7.695 850

\*\* 7.695 851

## MANUAL DISPENSER PRO

A perfect ergonomic design to ensure maximum comfort. The LABSOLUTE® manual dispenser Pro offers you long-lasting dispensing action and an ergonomic shape, lightweight design and smooth dispensing mechanism. Another benefit is that the window offers a clear view of the stroke setting and dispensing volume which is dependent on the dispenser tips used.

Included with delivery: manual dispenser Pro, 1x 5 ml dispenser tip, 1x 1 ml dispenser tip, adapter.

### High compatibility

- LABSOLUTE® dispenser tips and dispenser tips Plus
- Ritips® and Ritips® Professional (Ritter GmbH)
- PD-Tips TM (Brand GmbH & Co. KG)
- Combitips®, Combitips Plus® and Combitips Advanced® (Eppendorf AG)

### Maximum comfort

With perfect ergonomic style, the LABSOLUTE® manual dispenser Pro sits perfectly in the hand. The easy-to-operate dispensing button and light weight ensure maximum comfort, even with longer dosing series. The easy operation of the dispensing button makes volume selection, pick-up and drop possible with just one hand.

### Maximum flexibility

LABSOLUTE® manual dispenser Pro allows 120 programming steps – handy and flexible for 12 different tip sizes and with 10 stroke settings.

### Independent and maintenance-free

LABSOLUTE® manual dispensers have an entirely mechanical structure. This makes them maintenance-free and independent of additional resources, such as power packs or batteries.

### Our guarantee

Each individual device is checked after production for its functionality and precision. Only when all requirements of the DIN EN ISO 8655 standard have been met, does LABSOLUTE® manual dispenser Pro receive its serial number.



Description	PK	Art. no.
Manual dispenser Pro	1	7.695 800

## DISPENSER TIPS

The dispenser tips work according to the positive displacement principle and are available in three sizes, each in a non-sterile or sterile version. Suitable for volumes of 1 µl to 12500 µl.

- Complete safety and reproducibility - each individual tip is mechanically checked
- Purity as follows has been confirmed by independent laboratories: free of endotoxins, ATP, RNase and DNA
- Certificate available on request

### High compatibility with the following dispensers and others (upon request):

- LABSOLUTE® manual dispenser Pro
- Ripette®, Ripette® pro (Ritter GmbH)
- Multipette® 4780 (Eppendorf AG)
- HandyStep®, HandyStep® electronic\* (Brand GmbH & Co. KG)
- RepeatOne® (Starlab AG)
- DistriMan® Stepper (Gilson AG)

Volume ml	Sterile	PK	Art. no.
0.05**	No	100	7.695 950
1.25	No	100	7.695 951
12.5	No	100	7.695 952
0.05**	Yes	100	7.695 953
1.25	Yes	100	7.695 954
12.5	Yes	100	7.695 955

\* No volume indication on the display using these dispensers

\*\* When dispensing with tip size 0.05 ml, please use a suitable pipette tip (10 µl or 20 µl)



In Originalgröße abgebildet

## DISPENSER TIPS PLUS

The universally compatible dispenser tips Plus from LABSOLUTE® come in nine sizes and are suitable for volumes of 1 µl to 50000 µl. The tips work according to the positive displacement principle: which, for you, means safe dispensing without risk of contamination, even with infectious solutions. Irrespective of viscosity and volatility, the desired volume will be dispensed at all time – without forming aerosols. The dispenser tips are available in sterile and non-sterile designs.

- Rapid identification thanks to individual colour coding
- Complete safety and reproducibility – each individual tip is mechanically checked
- The sterile dispenser tips are individually packaged
- Free of endotoxins, ATP, RNase and DNA
- Ultra-fine conical tips increase precision, especially when dispensing in the single-digit µl range
- Thanks to their elongated shape, ideally suited for working with long laboratory vessels
- Certificate available on request
- Lot number on each packaging unit
- Autoclaving is not recommended

### Universal compatibility with the following dispensers and others (upon request):

- LABSOLUTE® manual dispenser Pro
- Ripette®, Ripette® Pro (Ritter GmbH)
- Multipette® 4780, Multipette® plus, Multipette® M4\* (Eppendorf AG)
- HandyStep®, HandyStep® electronic\* (Brand GmbH & Co.KG)
- RepeatOne® (Starlab AG)

\*No volume indication on the display using these dispensers

## TEST PACKAGE DISPENSER TIPS

The test package offers the ideal solution for testing all of the dispenser tips available. It contains all 12 sizes from 0.05 to 50 ml (non-sterile). There are five dispenser tips of each size in the package - making a total of 60 tips for you to test. For the 25 ml and 50 ml sizes, the matching adapters are included in the supplied package.

Description	PK	Art. no.
Test package dispenser tips	60	7.695 691

**ALL 12  
DISPENSER TIP  
SIZES – FOR YOU  
TO TEST**



Volume ml	Sterile	PK	Art. no.
0.1	No	100	7.695 670
0.2	No	100	7.695 671
0.5	No	100	7.695 672
1.0	No	100	7.695 673
2.5	No	100	7.695 674
5.0	No	100	7.695 675
10.0	No	100	7.695 676
25.0	No	25	7.695 677
50.0	No	25	7.695 678
0.1	Yes	100	7.695 680
0.2	Yes	100	7.695 681
0.5	Yes	100	7.695 682
1.0	Yes	100	7.695 683
2.5	Yes	100	7.695 684
5.0	Yes	100	7.695 685
10.0	Yes	100	7.695 686
25.0	Yes	25	7.695 687
50.0	Yes	25	7.695 688
Adapter for 25 ml tips		1	7.695 689
Adapter for 50 ml tips		1	7.695 690



Tips are not shown to scale

## BOTTLE TOP DISPENSERS

The LABSOLUTE® bottle top dispenser series is impressive with its high quality and unlimited reliability in combination with a high degree of safety and user-friendliness. Exceptionally high-quality materials guarantee a long service life and superlative chemical resistance.

### No compromises on quality or reliability

All wetted parts of the LABSOLUTE® bottle top dispensers are made of PTFE, fluorinated ethylene propylene and borosilicate glass. The constant ejection volume and completely bubble-free dispensing make them the number one choice in terms of precision and reproducibility. Each of the LABSOLUTE® dispensers comes with an individual certificate, since all devices are calibrated in accordance with DIN ISO 8655.

### Extra security when handling liquids and maximum handling comfort

- Protection of the borosilicate dispensing cylinder with PP material
- Safety closure valve prevents uncontrolled dripping, air contact or drying out
- Five universal adapters from 28 - 45 mm for all common bottle sizes
- Free-running mechanism thanks to specially constructed PTFE piston with silicon O-ring
- Telescopic suction tube to different bottle heights
- Rapid and easily visible volume adjustment with handy adjustment screw
- Autoclavable at 121 °C

Adapters with 28, 30, 36, 40 or 45 mm thread for securing the dispensers to bottles are included in the supplied package.



Volume range ml	Grad. ml	Accuracy max. vol. ≤ ± R%	Precision max. vol. ≤ CV%	PK	Art. no.
0.25 - 2.5	0.05	0.6	0.2	1	7.695 530
0.5 - 5	0.10	0.5	0.1	1	7.695 531
1.0 - 10	0.20	0.5	0.1	1	7.695 532
2.5 - 30	0.50	0.5	0.1	1	7.695 533
5.0 - 60	1.00	0.5	0.1	1	7.695 534
10.0 - 100	2.00	0.5	0.1	1	7.695 535

## BOTTLE TOP DISPENSERS WITH RECIRCULATION VALVE

The dispenser with recirculation valve allows a uniform, precise and reliable bubble-free dosing without reagent loss. The specially designed bottle adapter allows a 360° rotation of the dispenser on the mounted bottle.

Volume range ml	Grad. ml	Accuracy max. vol. ≤ ± R%	Precision max. vol. ≤ CV%	PK	Art. no.
0.25 - 2.5	0.05	0.6	0.2	1	7.695 540
0.5 - 5	0.10	0.5	0.1	1	7.695 541
1.0 - 10	0.20	0.5	0.1	1	7.695 542
2.5 - 30	0.50	0.5	0.1	1	7.695 543
5.0 - 60	1.00	0.5	0.1	1	7.695 544
10.0 - 100	2.00	0.5	0.1	1	7.695 545



## ACCESSORIES FOR BOTTLE TOP DISPENSERS

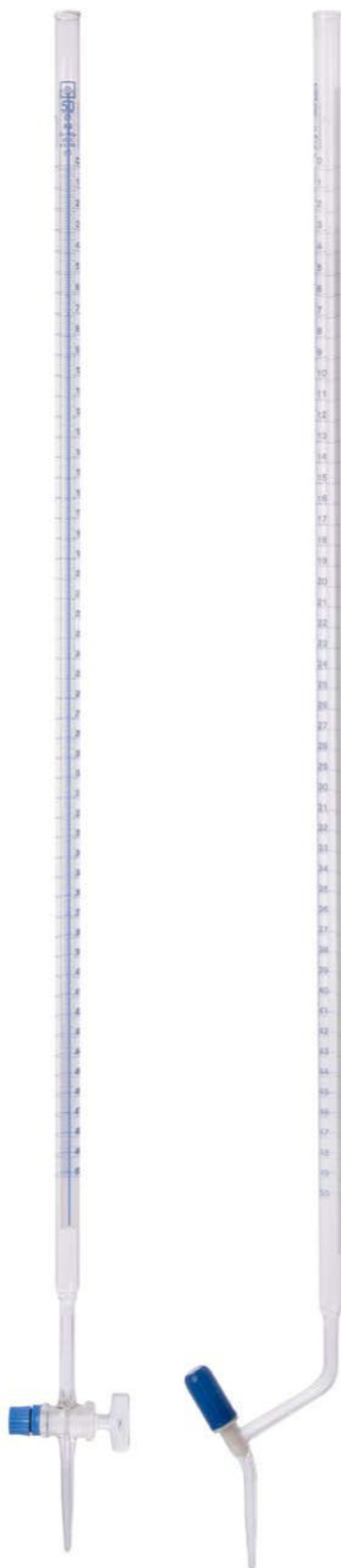
Accessories and spare parts can be reordered as required.

Description	PK	Art. no.
Glass cylinder 2.5 ml	1	7.695 510
Glass cylinder 5.0 ml	1	7.695 511
Glass cylinder 10.0 ml	1	7.695 512
Glass cylinder 30.0 ml	1	7.695 513
Glass cylinder 60.0 ml	1	7.695 514
Glass cylinder 100.0 ml	1	7.695 515
Adapter set (28, 32, 36, 40 and 45 mm)	1	7.695 516
Telescopic tube	1	7.695 517
Volume adjustment knob for 2.5, 5 and 10 ml cylinder	1	7.695 518
Volume adjustment knob for 30, 60 and 100 ml cylinder	1	7.695 519
Nozzle for 2.5, 5, and 10 ml cylinder	1	7.695 520
Nozzle for 30, 60 and 100 ml cylinder	1	7.695 521
PTFE piston for 2.5 ml cylinder	1	7.695 523
PTFE piston for 5 ml cylinder	1	7.695 524
PTFE piston for 10 ml cylinder	1	7.695 525
PTFE piston for 30 ml cylinder	1	7.695 526
PTFE piston for 60 ml cylinder	1	7.695 527
PTFE piston for 100 ml cylinder	1	7.695 528



## BURETTES

The LABSOLUTE® burettes made of borosilicate glass 3.3 comply with DIN EN ISO 385. They are available with straight and lateral stopcock with glass plug or PTFE needle valve. The class AS burettes are a very economic way to get reliable values in volumetric analysis quickly and easily. They are calibrated to "Ex" and have a blue graduation and inscription as well as a Schellbach stripe on the backside to be able to read the meniscus precisely.



### BURETTES, STRAIGHT STOPCOCK, CLASS AS

Capacity ml	Grad. ml	Tolerance ± ml	Stopcock with	PK	Art. no.
10	0.02	0.02	Glass key	1	7.691 144
25	0.05	0.05	Glass key	1	7.691 145
50	0.1	0.10	Glass key	1	7.691 146
10	0.02	0.02	PTFE spindle	1	7.691 147
25	0.05	0.03	PTFE spindle	1	7.691 148
50	0.1	0.05	PTFE spindle	1	7.691 149

### BURETTES, LATERAL STOPCOCK, CLASS AS

Capacity ml	Grad. ml	Tolerance ± ml	Stopcock with	PK	Art. no.
10	0.02	0.02	Glass key	1	7.691 150
25	0.05	0.03	Glass key	1	7.691 151
50	0.1	0.05	Glass key	1	7.691 152
10	0.02	0.02	PTFE spindle	1	7.691 153
25	0.05	0.03	PTFE spindle	1	7.691 154
50	0.1	0.05	PTFE spindle	1	7.691 155

## AUTOMATIC BURETTES ACC. TO DR. SCHILLING, CLASS B

The automatic LABSOLUTE® burettes according to Dr. Schilling can be used for several applications in many areas, such as electroplating, water treatment or sewage plants. They are impressing through their precise dosing, the possibility of fine titration and an exact draining tip. The class B burettes are justified to "Ex" and come with a LDPE bottle and solid stand. The tolerances comply with DIN EN ISO 385. There is a Schellbach stripe on the backside of the burettes that makes it easier to read the exact filling level. The bottle and the burette are fixed together by the titrating armature.

Burette capacity ml	Grad. ml	Tolerance ± ml	Bottle capacity ml	PK	Art. no.
10	0.05	0.03	500	1	7.691 140
15	0.1	0.04	1000	1	7.691 141
25	0.1	0.05	1000	1	7.691 142
50	0.1	0.08	1000	1	7.691 143



## ACCURACY CLASSES

With volumetric measurement, the subsequent analysis is only as precise as your sample preparation. However with some applications, absolute precision is needed, whereas in other cases a higher error limit can be tolerated. As a result, the LABSOLUTE® range includes volumetric flasks of accuracy class A, measuring cylinders of classes A and B, mixing cylinders of class A and graduated and volumetric pipettes of class AS.

The greatest deviations at each point on the scale are defined as the error limits. They also define the maximum permissible differences between the deviations at any two points on the scale. The differences between the classes are defined by the German Calibration Directive.

### Error limits for measuring & mixing cylinders, high form

Nominal volume	Scale division	Error limit class A
5 ml	0.1 ml	± 0.05 ml
10 ml	0.2 ml	± 0.1 ml
25 ml	0.5 ml	± 0.25 ml
50 ml	1 ml	± 0.5 ml
100 ml	1 ml	± 0.5 ml
250 ml	2 ml	± 1 ml
500 ml	5 ml	± 2.5 ml
1000 ml	10 ml	± 5 ml
2000 ml	20 ml	± 10 ml

### Error limits for measuring cylinders, low form

Nominal volume	Scale division	Error limit class B
5 ml	0.5 ml	± 0.2 ml
10 ml	1 ml	± 0.3 ml
25 ml	1 ml	± 0.5 ml
50 ml	1 ml	± 1 ml
100 ml	2 ml	± 1 ml
250 ml	5 ml	± 2 ml
500 ml	10 ml	± 5 ml
1000 ml	20 ml	± 10 ml
2000 ml	50 ml	± 20 ml

### Error limits for graduated pipettes

Nominal volume	Scale division	Error limit class AS
0.1 ml	0.01 ml	± 0.006 ml
0.2 ml	0.01 ml	± 0.006 ml
0.5 ml	0.01 ml	± 0.006 ml
1 ml	0.01 ml	± 0.007 ml
1 ml	0.10 ml	± 0.007 ml
2 ml	0.02 ml	± 0.010 ml
2 ml	0.10 ml	± 0.010 ml
5 ml	0.05 ml	± 0.030 ml
5 ml	0.10 ml	± 0.030 ml
10 ml	0.1 ml	± 0.05 ml
20 ml	0.1 ml	± 0.1 ml
25 ml	0.1 ml	± 0.1 ml
25 ml	0.2 ml	± 0.1 ml

### Error limits for volumetric flasks with wide neck

Nominal volume	Neck size NS	Error limit class A
5 ml	10/19	± 0.040 ml
10 ml	10/19	± 0.040 ml
20 ml	12/21	± 0.060 ml
25 ml	12/21	± 0.060 ml
50 ml	14/23	± 0.100 ml
100 ml	14/23	± 0.100 ml
1000 ml	29/32	± 0.600 ml

### Error limits for volumetric flasks with narrow neck

Nominal volume	Neck size NS	Error limit class A
1 ml	7/16	± 0.025 ml
2 ml	7/16	± 0.025 ml
5 ml	7/16	± 0.025 ml
10 ml	7/16	± 0.025 ml
20 ml	10/19	± 0.040 ml
25 ml	10/19	± 0.040 ml
50 ml	12/21	± 0.060 ml
100 ml	12/21	± 0.100 ml
200 ml	14/23	± 0.150 ml
250 ml	14/23	± 0.150 ml
500 ml	19/26	± 0.250 ml
1000 ml	24/29	± 0.400 ml
2000 ml	29/32	± 0.600 ml
5000 ml	34/35	± 1.200 ml

### Error limits for volumetric pipettes

Nominal volume	Error limit class AS
1 ml	± 0.008 ml
2 ml	± 0.010 ml
5 ml	± 0.015 ml
10 ml	± 0.02 ml
20 ml	± 0.03 ml
25 ml	± 0.03 ml
50 ml	± 0.05 ml
100 ml	± 0.08 ml



**OPTICAL  
INSTRUMENTS**

## MICROSCOPE SLIDES

LABSOLUTE® microscope slides made of soda-lime glass comply with DIN ISO 8037-1 and 8037-2, bear the CE mark and are produced in compliance with Directive 98/79/EC (IVD). This means they are the ideal solution for excellent and reproducible microscopy results. The microscope slides, measuring approx. 76 x 26 mm, have a thickness of around 1 mm and are delivered pre-cleaned and ready for use. The 20 mm wide, coloured or colourless frosted area is at one end on one side.

## MICROSCOPE SLIDES, CUT EDGES

Cut microscope slides are particularly economical and therefore represent an excellent alternative to the ground versions, for routine tasks. The corners and edges are 90° for all cut microscope slides.



Description	Writing area	PK	Art. no.
Without frosted area	-	50	7.695 001
With frosted area	-	50	7.695 002
With frosted area	White	50	7.695 005
With frosted area	Blue	50	7.695 006
With frosted area	Pink	50	7.695 007
With frosted area	Yellow	50	7.695 008
With frosted area	Green	50	7.695 009

## MICROSCOPE SLIDES, GROUND EDGES

The ground version of the slides is used to avoid cutting injuries or glass breakages during automated processing. Microscope slides have corners with either 45° or 90°. The edges are 90° for all ground microscope slides.



Description	Writing area	PK	Art. no.
90° corners, with frosted area	-	50	7.695 003
45° corners, without frosted area	-	50	7.695 004
45° corners, with frosted area	White	50	7.695 012
45° corners, with frosted area	Yellow	50	7.695 015
45° corners, with frosted area	Green	50	7.695 016
45° corners, with frosted area	Orange	50	7.695 017



## ADHESION SLIDES FOR TISSUE SECTIONS

Adhesion slides ensure quicker flatness and better adhesion of the samples. The microscope slides with a white frosted area and ground edges are supplied in shrink-wrapped plastic boxes of 72 pieces. The angle of the edges and corners is 90° for both items.

Description	PK	Art. no.
(+) positively charged	72	7.695 019
Silanized surface	72	7.695 021



## COVER GLASSES, THICKNESS 1 (0.13 - 0.16 MM)

The LABSOLUTE® cover glasses made of highly resistant borosilicate glass 3.3 of the first hydrolytic class are the perfect addition to every microscopy system. They are guaranteed free of contamination, bubbles or smears and are manufactured in compliance with the 98/79/EC (IVD) Directive, satisfying all of the requirements of DIN ISO 8255-1 and 8255-2. The cover glasses have the CE mark and are supplied in especially handy and secure boxes.

Dimensions mm	PK	Art. no.
15 x 15	200	7.695 022
18 x 18	200	7.695 023
20 x 20	200	7.695 024
22 x 22	200	7.695 025
24 x 24	200	7.695 026
21 x 26	200	7.695 027
24 x 32	100	7.695 028
24 x 40	100	7.695 029
24 x 50	100	7.695 030
24 x 60	100	7.695 031



## MICROSCOPE SLIDE FOLDERS, CARDBOARD

The LABSOLUTE® folders are made of cardboard and available in two different sizes. The slides lie safely in recesses which feature thumb cuts for easy slide removal. The lid provides further protection against damage and contamination and a practicable overview of your preparations thanks to a printed index.

- For 20 or 30 microscope slides (76 x 26 mm)
- Available in black

Capacity	Dimensions W x H x D mm	PK	Art. no.
20 slides	208 x 9 x 341	1	7.695 060
30 slides	281 x 10 x 328	1	7.695 061



## MICROSCOPE SLIDE BOXES, PS

The ABSOLUTE® slide storage boxes are made of stable PS and will be delivered with a dustproof lid. The boxes can be stacked for space-saving and safe storage. Numbered positions on the bottom and an index table facilitate the identification and organization of your preparations.



- For 50 microscope slides (76 x 26 mm)
- Available in different colours
- Temperature-resistant down to -40 °C
- Dimensions (W x H x D): 170 x 30 x 83 mm

Colour	PK	Art. no.
Blue	1	7.695 040
Yellow	1	7.695 041
Green	1	7.695 042
Mint green	1	7.695 043
Red	1	7.695 044
Black	1	7.695 045
Violet	1	7.695 046
White	1	7.695 047

## ABSORBENT PAPER FOR MICROSCOPIC PURPOSES

The absorbent paper strips are made of qualitative filter paper. They are suited to absorb excess fluids such as staining solutions for microscope specimens.



Dimensions D x W mm	PK	Art. no.
37 x 100	50	7.698 031

## CLEANING TISSUES

Fine silk papers for cleaning of lenses and optical surfaces.



Dimensions D x W mm	PK	Art. no.
80 x 100	50	7.698 030

## CUVETTES

The LABSOLUTE® disposable cuvettes for the VIS and UV range feature optimised photometric properties and high transparence thanks to modern manufacturing methods. Furthermore, you benefit from the fact that all cuvettes within one packing unit are sorted according to their numbered cavities of origin. Consequently, you receive technically identical cuvettes which prevent deviations in extinction coefficient values. Supplied in practical, reclosable styrofoam racks.

- Increased heat transfer thanks to optimized form and small wall thickness
- Recessed measuring fields: reduce risk of scratching by the cuvette holder
- Arrow marker points to transmission direction
- Path length: 10 mm
- Outer dimensions (W x H x D): 12.5 x 45 x 12.5 mm



### DISPOSABLE CUVETTES FOR THE VIS RANGE

Description	Material	Volume ml	Range nm	PK	Art. no.
Macro	PS	2.5 - 4.5	340 - 900	100	7.697 100
Semi-micro	PS	1.5 - 3.0	340 - 900	100	7.697 101
Macro	PMMA	2.5 - 4.5	300 - 900	100	7.697 102
Semi-micro	PMMA	1.5 - 3.0	300 - 900	100	7.697 103

### DISPOSABLE CUVETTES FOR THE UV RANGE

Description	Volume ml	Range nm	PK	Art. no.
Macro	2.5 - 4.5	220 - 900	100	7.697 104
Semi-micro	1.5 - 3.0	220 - 900	100	7.697 105

## MULTICELL CUVETTE, PMMA

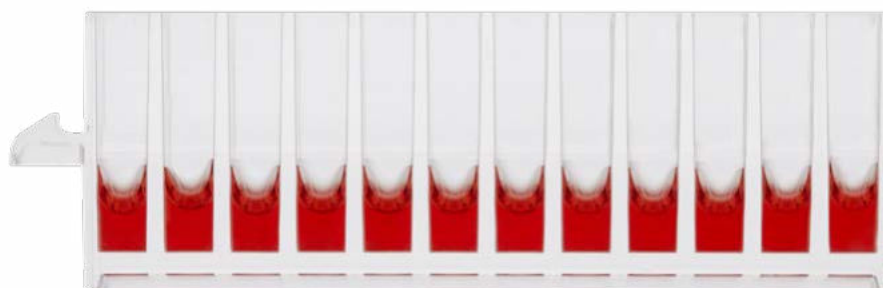
The LABSOLUTE® multicell cuvettes dispose of 12 cells. They are suitable for Thermo Scientific automated analysers and can be used for quality check and photometric analysis of different substances.

- Total cell volume: 0.4 ml
- Working volume: 0.1 ml

### Compatible with following Thermo Scientific analyzers:

- Arena 20
- Arena 20XT
- Arena 30
- Arena 60
- Konelab 30
- Konelab Arena 30
- Konelab Prime 30

Description	Range nm	Pack size pieces	PK	Art. no.
Multicell cuvettes, 12 cells	340 - 700	40 x 25	1000	7.697 106





**CLEANING &  
STERILISATION**



## 2-PROPANOL FOR DISINFECTION, 70 %

CHEMSOLUTE® 2-Propanol is ideal for the cleaning and decontamination of lab surfaces, production areas and processing equipment.

Description	Capacity l	PK	Art. no.
Spray bottle	1	1	1199.1009
Plastic bottle	1	1	1199.1000
Plastic canister	5	1	1199.5000

## LABORATORY WIPES, 2-PLY

The LABSOLUTE® laboratory wipes made of non-chlorine bleached cellulose are especially low-lint and soft.

The holder is suitable for hygienic and easily accessible storage of the laboratory wipes. It is delivered including wall mounting material.



Description	Width mm	Length mm	PK	Art. no.
30 boxes with 150 wipes	210	220	30	7.695 251
Wall holder made of stainless steel			1	7.696 920

## WIPE ROLL, CELLULOSE

The 2-ply wipe roll from LABSOLUTE® is absorbent and tear-resistant. Two rolls each with 50 sheets of 20 x 26 cm are packed in a shrink wrap.

- White
- Grammage: 2 x 18 g/m<sup>2</sup>
- Inner core Ø: 45 mm



Description	PK	Art. no.
Roll with 50 sheets	2	7.695 253

## CLEANING WIPES

The special finish and composition of the viscose and polyester fibres make the LABSOLUTE® wipes tremendously tear-resistant, very soft, solvent-resistant and low-lint.

- No scratching of sensitive surfaces
- High absorption and dry-wiping properties
- Suitable for LABSOLUTE® dispenser system (7.695 261)



Description	Width mm	Length mm	PK	Art. no.
20 packs with 50 wipes	230	420	1000	7.695 260

### HAND TOWELS, 3-PLY

Bright white, extra absorbent, interfolded, suitable for LABSOLUTE® dispenser system (7.695 261) and many more, economic use through high absorbency and comfortable size.

Description	Width mm	Length mm	PK	Art. no.
20 packs with 100 towels	220	420	2000	7.695 262



### WIPE DISPENSER

Secured to the wall, the dispenser ensures rapid and easy access to LABSOLUTE® wipes at all times. The white dispenser is made of sturdy plastic and is therefore particularly stable and resilient, even when used frequently.

- Maintenance-free
- Easy to refill
- Lockable

Description	Height mm	Width mm	Depth mm	PK	Art. no.
Wipe dispenser	290	295	165	1	7.695 261



### CLEANING SPONGES

LABSOLUTE® offers high-quality sponges for cleaning and removing stubborn dirt on sensitive surfaces.

- Household sponge in three different colours
- Cleaning sponge with strong scrubbing surface and handy grip groove

Description	Dimensions W x H x D mm	PK	Art. no.
Sponge set, threepart	143 x 40 x 90	3	7.695 270
Cleaning sponge with handle	95 x 45 x 70	3	7.695 271



### ALL PURPOSE CLOTHS

The LABSOLUTE® all purpose cloths can absorb large quantities of liquid quickly and are suitable for universal use.

Description	Dimensions W x L mm	PK	Art. no.
All purpose cloths	38 x 38	3	7.695 272



## BENCH PROTECTION PAPER

The double-layered surface protector from LABSOLUTE® is ideally suited to protect all working surfaces from chemicals and radioactive, corrosive and toxic substances. The upper layer is made of 100 % cellulose which is highly absorbent.

The bottom layer made of PE provides high tear resistance and prevents liquids leaking through in order to protect work surfaces from contamination.

- Dimensions (W x D): 460 x 570 mm
- Thickness: 0.24 mm
- Weight: 125 g/m<sup>2</sup>
- Absorption: 170 g/m<sup>2</sup>

Type	PK	Art. no.
Sheets	100	7.697 920





A close-up photograph of a laboratory experiment. A gloved hand holds a clear petri dish containing a green plant stem. The stem is held in place by a clear plastic clip. The petri dish is tilted, and a small amount of orange liquid is visible at the bottom. In the background, a red liquid is being poured from a bottle into another container. The overall scene is brightly lit, emphasizing the colors of the plant, the liquid, and the lab equipment.

**LIFE SCIENCE**

## MICRO TUBES, PP

The LABSOLUTE® micro tubes are made of high-quality PP and are resistant to mechanical and chemical stresses. Simple and safe opening and closing of the vessel allow safe handling for greater comfort.



- Certified DNase, RNase and pyrogen-free
- Non-sterile
- Guaranteed metal-free
- Precise graduations lines on 1.5 ml and 2.0 ml reaction vessels
- Puncturable cap
- Can be centrifuged up to 25000 x g
- Autoclavable

Volume ml	PK	Art. no.
0.5	1000	7.696 750
1.5	1000	7.696 751
2.0	1000	7.696 752

## SAFE SEAL MICRO TUBES, PP

The safe seal micro tubes from LABSOLUTE® have a special locking mechanism preventing unintentional opening of the lid during applications with thermal stress.



- Frosted cover and labelling field
- Graduation for easy volume determination
- Non-sterile
- Autoclavable

Volume ml	PK	Art. no.
0.5	1000	7.696 755
1.5	1000	7.696 756
2.0	1000	7.696 757

## MICRO TUBES 5 ML, PP

The LABSOLUTE® 5 ml micro tubes with attached snap-on cap are ideal for working with volumes up to 5 ml. For incubations above 80 °C, it is recommended to close the tube with the clip (7.696 749).

- Low binding variant for maximum sample recovery
- Amber vessels are ideal for light-sensitive materials
- Free from DNase, RNase and pyrogens
- Centrifugation up to 20000 x g
- Cold-resistant up to -86 °C
- Autoclavable

Description	PK	Art. no.
Transparent	100	7.696 740
Transparent, Low Binding	50	7.696 741
Amber	100	7.696 742
Clip	100	7.696 749



## PCR CONSUMABLES

LABSOLUTE® offers a comprehensive range in the field of PCR consumables. These include tubes, strips of 8 tubes, 96-well plates and sealing films. In addition to the standard profile variants with 0.2 ml working volume, we also offer some low-profile versions with a working volume of 0.1 ml in the case of strips and plates.

- Suitable for all common thermal cyclers
- Optimal heat transfer and short cycle times through very thin and uniform wall thickness
- 96-well PCR plates with black alphanumeric coding
- Free of DNase, RNase and human DNA

## PCR TUBES 0.2 ML

The LABSOLUTE® PCR tubes offer optimum heat transfer between the thermal cycler and the reaction mix through their extra thin and uniform vessel walls.

- Compatible with all major thermal cyclers
- Available with flat and domed caps
- Easy and safe opening and closing with one hand
- High-quality PP (metal-free)
- Free from DNase, RNase, human DNA, pyrogens and PCR inhibitors
- Autoclavable

Description	PK	Art. no.
PCR tubes, flat caps	1000	7.696 500
PCR tubes, domed caps	1000	7.696 501



## STRIPS OF 4/8 PCR TUBES



The LABSOLUTE® strips of 4/8 PCR tubes offer optimum heat transfer between the thermal cycler and the reaction mix through their extra thin and uniform vessel walls.

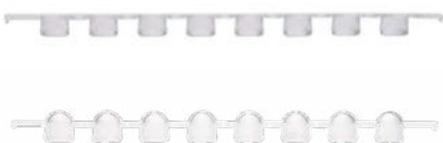
- Compatible with all major thermal cyclers
- Secure sealing reduces evaporation
- Available with flat and domed caps
- High quality PP
- Free from DNase, RNase and human DNA
- Standard profile with 0.2 ml working volume
- Low profile with 0.1 ml working volume
- Autoclavable



Description	Capacity ml	Colour	PK	Art. no.
Strips of 4 PCR tubes for Qiagen/Corbett Rotor-Gene®	0.1	Transparent	250	7.696 519
Strips of 8 PCR tubes with flat caps	0.2	Transparent	125	7.696 510
Strips of 8 PCR tubes with domed caps	0.2	Transparent	125	7.696 511
Strips of 8 PCR tubes with flat caps	0.1	Transparent	120	7.696 512
Strips of 8 PCR tubes with domed caps	0.1	Transparent	120	7.696 513
Strips of 8 PCR tubes without caps	0.2	Transparent	125	7.696 514
Strips of 8 PCR tubes with flat caps	0.1	White	120	7.696 515
Strips of 8 PCR tubes with flat, attached caps	0.2	Transparent	120	7.696 516
Strips of 8 PCR tubes with flat, attached caps	0.1	Transparent	120	7.696 517
Strips of 8 PCR tubes with domed, attached caps	0.2	Transparent	120	7.696 518

## PCR CAP STRIPS

The LABSOLUTE® cap strips are made of virgin PP and seal strips of 8 tubes and 96-well plates optimally. For easy orientation, the ends are marked differently. The strips with flat caps are suitable for fluorescence measurements (e.g. qPCR).



Description	PK	Art. no.
Flat caps	300	7.696 520
Domed caps	300	7.696 521

## PCR 96-WELL PLATES

The LABSOLUTE® 96-well PCR plates offer optimum heat transfer between the thermal cycler and the reaction mix through their extra thin and uniform vessel walls. The plates are sealable with adhesive films, heat sealing films and cover strips with flat and domed caps. The slightly raised rims of the individual wells reduce cross-contamination and evaporation of the samples. The black alphanumeric coding allows optimal sample distinction. All plates are free of DNase, RNase and human DNA.

### 96-well, skirted, low profile

Skirted 96-well PCR plates are rigid and suited for processing and transportation by automatic pipetting systems. Cut corner: H1.

### 96-well, semi-skirted

96-well semi-skirted PCR plates can be easily labelled or tagged with a barcode. Cut corner: A12.

### 96-well, for Roche® LightCycler® 480

The plates are perfect for use in LC480. Homogeneous white coloration with titanium dioxide and a smooth surface reduce interfering autofluorescence signals. Cut corner: H12.

### 96-well, non-skirted

96-well non-skirted PCR plates are suitable for a broad spectrum of thermal cyclers. Cut corner: H12.



Description	Capacity ml	Colour	PK	Art. no.
Skirted, low profile	0.15	Transparent	50	7.696 530
Non-skirted, standard profile	0.20	Transparent	50	7.696 535
Semi-skirted, standard profile	0.20	Transparent	50	7.696 540
Semi-skirted, standard profile, ABI® style	0.20	Opaque	50	7.696 541
Semi-skirted, low profile, for Roche LC480®	0.15	White	50	7.696 545

## PCR ADHESIVE FOILS

Self-adhesive foils for safe sealing of 96-well PCR plates from LABSOLUTE® are free from human DNA and RNA, nucleases and pyrogens.



**PCR adhesive foil:** Polyester film with an acrylic-based adhesive, which is suitable for PCR, qPCR and other colorimetric assays, but has a low autofluorescence.

**Cover and storage foil:** PP foil with acrylic-based adhesive for universal closing of 96-well plates. Reliably protects the samples against evaporation and dust; removable, non-pierceable.

**PCR and storage foil:** The 20 µm thick aluminium foil with acrylic-based adhesive is easily pierceable without sticking the pipette tips or creating a vacuum.

**qPCR adhesive foil:** This qPCR foil is specially developed for qPCR applications. The pressure-sensitive adhesive is only released when the film comes into contact with the raised rims of the individual wells, thereby ensuring reliable sealing with high transparency and minimal autofluorescence.

Description	Material	Temp. range °C	PK	Art. no.
PCR adhesive foil	Polyester	-20 - 110	100	7.696 570
Cover and storage foil	Polypropylene	-20 - 80	100	7.696 571
PCR and storage foil	Aluminium	-40 - 120	100	7.696 572
qPCR adhesive foil	Polyolefin with pressure-sensitive adhesive	-80 - 100	100	7.696 573

## PETRI DISHES, PS

The LABSOLUTE® Petri dishes are made of crystal-clear PS and offer high optical clarity. The dishes with three vents support gas exchange and are ideal for short incubation times. Dishes without vents are best suited for anaerobic and long-term work. The Petri dishes are prepared and packed under aseptic conditions. Sterilisation for the sterile dishes is done by beta rays.

- Perfectly stackable
- Heat-resistant up to 80 °C

## CONTACT PLATES, STERILE, PS

The contact plates with counting grid are packed in sub-units of 10 plates.



Outer Ø mm	Height mm	Vents	PK	Art. no.
55	17	Yes	1000	7.696 408

## PETRI DISHES, PS

Packed in sub-units of 10 plates or 20 plates ( $\varnothing = 94$  mm).

Outer $\varnothing$ mm	Vents	Sterile	PK	Art. no.
30	Yes	Yes	800	7.696 406
60	Yes	Yes	1000	7.696 404
60	No	Yes	1000	7.696 405
94	Yes	No	480	7.696 400
94	Yes	Yes	480	7.696 402
94	No	No	480	7.696 401
94	No	Yes	480	7.696 403
150	Yes	Yes	180	7.696 407



## PETRI DISHES, SODA-LIME GLASS

The LABSOLUTE® Petri dishes are made of soda-lime glass and supplied in two parts. They are autoclavable at 121 °C.

Inner $\varnothing^*$ mm	Outer $\varnothing^{**}$ mm	Height*** mm	PK	Art. no.
34	40	12	1	7.692 000
55	60	15	1	7.692 001
75	80	15	1	7.692 002
95	100	10	1	7.692 003
95	100	15	1	7.692 004
84	90	15	1	7.692 005
95	100	20	1	7.692 006
115	120	20	1	7.692 007
142	150	25	1	7.692 008
172	180	30	1	7.692 009
193	200	30	1	7.692 010
193	200	50	1	7.692 011

\* Inner diameter of the bottom plate

\*\* Outer diameter of the upper plate

\*\*\* Height of the bottom plate



## RACK FOR PETRI DISHES, ACRYLIC

The LABSOLUTE® rack for Petri dishes is suitable for 30 dishes up to a diameter of 100 mm and designed to be used on the bench or as wall installation.

- Dimensions (W x H x D): 107 x 236 x 222 mm
- Fastening material included

Description	PK	Art. no.
Rack for Petri dishes	1	7.696 365



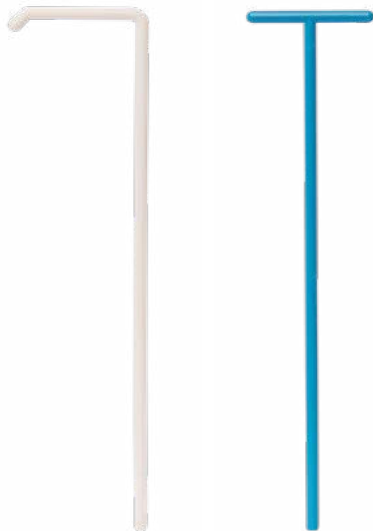


### DISPOSABLE INOCULATION LOOPS, STERILE

The LABSOLUTE® disposable inoculation loops have a flexible loop at one end to inoculate soft agar culture media and a needle for picking individual colonies at the other end. The disposable inoculation loops are sterile packed to 20 pieces in a paper/plastic blister.

- Length: 195 mm
- Packed in resealable bags

Capacity µl	Colour	PK	Art. no.
10	Blue	2000	7.696 430
10	Blue	10000	7.696 420
1	White	2000	7.696 431



### DISPOSABLE SPATULAS, L- AND T-SHAPED, PS

The L- and T-shaped spatulas from LABSOLUTE® are ideally suited for the uniform plating of large volumes.

- Individually packed or pack of 5 pieces
- Smooth, rounded surface
- Gamma sterile

Description	Sterile Sub-PK Pieces	PK	Art. no.
L-shape	1	500	7.696 435
L-shape	5	2000	7.696 436
T-shape	1	500	7.696 437
T-shape	5	2000	7.696 438



### SPOT PLATES, PORCELAIN

The LABSOLUTE® spot plates are made of high-quality porcelain. The surface is completely glazed. Compared to the reaction plates made from plastics, the porcelain spot plates are much more resistant against influences of temperature and chemicals. Finally the spot plates are easy to clean and autoclavable.

Number of cavities	Width mm	Length mm	Bore diam. mm	PK	Art. no.
6	112	81	25	1	7.694 985
12	115	91	17	1	7.694 986



## CELL CULTURE FLASKS, PS, TREATED, STERILE

The cell culture flasks from LABSOLUTE® are made exclusively of PS, corresponding to the highest international standards (USP Class VI). A short, wide and angled neck allows an easy handling while the risk of contamination is minimized. The vacuum gas plasma treatment of surfaces allows adherent cells a uniform and even cell adhesion.

- Ergonomic design for easy handling
- Short and wide sloping neck for easy access
- Easily stackable
- Both flasks sides have engraved graduation with a labelling area
- With standard screw cap or screw cap with a hydrophobic 0.22 µm filter for ventilation
- Packed upright in resealable bags
- Sterilized by radiation (SAL 10<sup>-6</sup>)



Cover type	Growth area cm <sup>2</sup>	Working volume ml	Total volume ml	Sterile Sub-PK Pieces	PK	Art. no.
Filter screw cap	12.5	20	25	10	200	7.696 780
Filter screw cap	25.0	40	50	10	200	7.696 781
Filter screw cap	75.0	175	250	5	100	7.696 782
Filter screw cap	182.5	400	600	5	40	7.696 783
Standard screw cap	12.5	20	25	10	200	7.696 784
Standard screw cap	25.0	40	50	10	200	7.696 785
Standard screw cap	75.0	175	250	5	100	7.696 786
Standard screw cap	182.5	400	600	5	40	7.696 787

## CELL CULTURE DISHES, PS, TREATED, STERILE

All LABSOLUTE® cell culture dishes are made of high-quality, optically clear PS, so that they are also suitable for microscopy.

- Effective gas exchange
- Easily stackable
- 60 mm, 70 mm and 100 mm dishes with grip ring
- Surfaces are treated with vacuum gas plasma
- Sterilized by radiation (SAL 10<sup>-6</sup>)



Ø mm	Height mm	Growth area cm <sup>2</sup>	Sterile Sub-PK Pieces	PK	Art. no.
35	12	8.5	10	960	7.696 770
60	18	21.2	10	600	7.696 771
70	15	36.3	10	600	7.696 772
90	17	55.0	10	500	7.696 773
100	22	60.8	10	300	7.696 774
150	22	143.0	1	120	7.696 775

## CELL CULTURE MULTIWELL PLATES, PS, TREATED, STERILE



The LABSOLUTE® multiwell tissue culture plates are suitable for handling multiple samples in a single experiment. From 4-well up to 96-well plates, we offer you the appropriate multiwell plate for every experiment. Numbered wells and a rounded corner in the cover reduce misplacement and facilitate identification. The vacuum gas plasma treatment of surfaces allows adherent cells a uniform and even cell adhesion.

- Evaporation is reduced by condensation rings
- Easily stackable
- Individually wrapped in paper/plastic blister pack
- Sterilized by radiation (SAL 10<sup>-6</sup>)

No. of wells	Total volume per well ml	Working volume per well ml	Growth area per well cm <sup>2</sup>	PK	Art. no.
4	1.50	0.18 - 0.28	1.96	100	7.696 789
6	17.00	1.90 - 2.90	9.60	100	7.696 790
12	6.80	0.76 - 1.14	3.85	100	7.696 791
24	3.50	0.38 - 0.57	1.93	100	7.696 792
48	1.55	0.19 - 0.29	0.84	100	7.696 793
96	0.39	0.075 - 0.20	0.33	100	7.696 794
96 U*	0.32	0.075 - 0.20	0.32	100	7.696 795

\* With round bottom

## CELL SCRAPERS AND CELL LIFTERS, STERILE

The LABSOLUTE® cell scrapers and lifters enable easy and efficient cell harvest. Optimize your cell harvest by using the cell scraper for cell culture flasks and cell lifter for dishes. The handle is made of ABS and allows the controlled use of the thin, flexible blade made of TPE.



- Two different handle lengths (25 cm with 2 cm blade and 39 cm with 3 cm blade)
- Two blade positions: scraper and lifter
- Individually wrapped in paper/plastic blister packs

Description	Length mm	Blade length mm	PK	Art. no.
Cell scraper	250	20	100	7.696 760
Cell lifter	250	20	100	7.696 761
Cell scraper	390	30	100	7.696 762
Cell lifter	390	30	100	7.696 763

## CELL STRAINERS

The LABSOLUTE® cell strainers are made of a strong nylon mesh and are characterized by an even distribution of the mesh pores. With the sterile cell sieves, cell suspensions can be quickly and easily filtered to collect primary cells or prepare samples for flow cytometry.

- Available in three mesh sizes: 40 µm, 70 µm and 100 µm
- Color coded for easy distinction
- Extended edge allows easy handling even with tweezers
- Individually packed, gamma-irradiated (SAL 10<sup>-6</sup>)
- DNase, RNase and pyrogen-free



Mesh size µm	Colour	PK	Art. no.
40	Blue	50	7.696 767
70	White	50	7.696 768
100	Yellow	50	7.696 769

## DEEP WELL PLATES

The LABSOLUTE® Deep well Plates meet all the important requirements for a wide variety of applications in cell culture, pharmacy and molecular biology. In addition to the long-term storage of samples, the deep well plates are suitable for a variety of other applications such as cultivation of microorganisms, screening tests and extraction of nucleic acids and proteins.

The plates are made of 100 % pure polymer without additives in a class 8 clean room and are free of RNase, DNase, human DNA, endotoxins, PCR inhibitors and ATP. Due to the precise production according to ANSI/SLAS 2004 standard, the plates are ideally suited for use with robots and automated liquid handling systems. The plates made of PP offer high chemical resistance (e.g. to DMSO) and are autoclavable at 121 °C.



Description	Material	Volume ml	PK	Art. no.
Round bottom, round wells	PP	0.5	56	7.696 546
Round bottom, round wells	PP	1.2	32	7.696 547
Round bottom, round wells	PS	1.2	32	7.696 548
Round bottom, square wells	PP	2.2	32	7.696 549

## SEALING MATS FOR DEEP WELL PLATES

The LABSOLUTE® sealing mats for deep well plates protect the samples against contamination and evaporation. The alphanumeric grid allows easy sample identification.



Description	For	Material	PK	Art. no.
Round caps, piercable	7.696 546 / 7.696 547 / 7.696 548	TPE	50	7.696 575
Square caps, non-piercable	7.696 549	EVA	50	7.696 576

## DISPOSABLE SYRINGES, NON-STERILE, PP

The two-part, non-sterile LABSOLUTE® disposable syringes, with Luer lock connection according to DIN EN 1707 or Luer slip connection complying with DIN EN 20594-1, are fully manufactured from robust, chemical-resistant PP. They are free of latex, plasticizers and PVC. There are no rubber plunger seals or silicone lubricants that can cause contamination of your samples. The syringes are also impressive due to the safe functional back-stop feature and an easy-to-read permanent graduation.



### DISPOSABLE SYRINGES, PP, LUER LOCK, NON-STERILE

Capacity ml	PK	Art. no.
2	100	7.672 433
5	100	7.643 933
10	100	6.259 211
20	100	7.672 432



### DISPOSABLE SYRINGES, PP, LUER SLIP, NON-STERILE

Capacity ml	PK	Art. no.
1	100	7.657 545
2	100	7.644 125
5	100	7.644 126
10	100	7.644 127
20	100	7.644 128

A collection of ball-and-stick molecular models is scattered across a blurred background of a periodic table. The models consist of white, black, and red spheres connected by grey rods. One model in the foreground is in sharp focus, showing a red sphere bonded to a white sphere. Other models are visible in the background, some in focus and some blurred. The periodic table cells are visible, with some labels like 'Os Osmium', 'Hs Hassium', and 'Mt Meitnerium' partially legible.

**CHEMICALS  
FROM A-Z**

## ACETIC ACID

- CH<sub>3</sub>COOH
- M = 60.05 g/mol
- CAS no. 64-19-7
- EC Index no. 607-002-00-6
- EC no. 200-580-7
- Density ~1.05 g/ml
- UN-No. 2789
- ADR 8 (3), II

## GHS

- H226 H314
- P210 P233 P241 P242 P243 P260 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P403+P235 P405 P501



### Specification

- Clear, colourless liquid
- Melting point 16.5 – 17 °C
- Boiling point 117 – 118 °C

### ACETIC ACID P. A., ACS, ISO, PH. EUR. (MIN. 96.0 %)

#### Specification

- Non-volatile substances max. 0.0005 %
- Silver (Ag) max. 0.000001 %
- Aluminium (Al) max. 0.000005 %
- Arsenic (As) max. 0.000001 %
- Barium (Ba) max. 0.000001 %
- Beryllium (Be) max. 0.000001 %
- Bismuth (Bi) max. 0.00001 %
- Calcium (Ca) max. 0.00002 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000001 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000001 %
- Iron (Fe) max. 0.00001 %
- Germanium (Ge) max. 0.000005 %
- Potassium (K) max. 0.00001 %
- Lithium (Li) max. 0.000001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000001 %
- Molybdenum (Mo) max. 0.000002 %
- Sodium (Na) max. 0.00005 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.000002 %
- Strontium (Sr) max. 0.000001 %
- Titanium (Ti) max. 0.00001 %
- Thallium (Tl) max. 0.000005 %
- Vanadium (V) max. 0.000001 %
- Zinc (Zn) max. 0.000005 %
- Zirconium (Zr) max. 0.00001 %
- Chloride (Cl) max. 0.00005 %
- Phosphate (PO<sub>4</sub>) max. 0.00005 %
- Sulphate (SO<sub>4</sub>) max. 0.00005 %
- Acetaldehyde (C<sub>2</sub>H<sub>4</sub>O) max. 0.0002 %
- Acetic anhydride (C<sub>4</sub>H<sub>6</sub>O<sub>3</sub>) max. 0.01 %
- Indifference against CrO<sub>3</sub> complies
- Reducing substances max. 0.002 %

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2296.2500

### ACETIC ACID (GLACIAL) PURISS., DAB, PH. EUR., BP, PH. FRANÇ., USP, FCC (MIN. 99.5 %)

#### Specification

- Non-volatile substances max. 0.003 %
- Aluminium (Al) max. 0.00005 %
- Arsenic (As) max. 0.0002 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0002 %
- Lead (Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0002 %
- Sulphate (SO<sub>4</sub>) max. 0.0005 %
- Reducing substances max. 0.01 %

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	2268.2511

### ACETIC ACID (GLACIAL) P. A., PH. EUR., BP (MIN. 99.0 %)

#### Specification

- Assay 99.0 - 100.5 % w/w
- Identity A, B complies
- Freezing point min. 14.8 - 17.0 °C
- Residue on evaporation max. 0.01 % w/w
- Substances reducing KMnO<sub>4</sub> complies
- Reducing substances (0.1 M Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) max. 10.0 ml
- Chloride (Cl) max. 0.0025 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Appearance of the solution (20 %) complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2289.1000
2.5 l	Glass bottle	2289.2500
25 l	Plastic canister	2289.9025

**ACETIC ANHYDRIDE**

- C<sub>4</sub>H<sub>6</sub>O<sub>3</sub>
- M = 102.09 g/mol
- CAS no. 108-24-7
- EC Index no. 607-008-00-9
- EC no. 203-564-8

- UN-No. 1715
- ADR 8 (3), II

**GHS**

- H226 H302+H332 H314 H335
- P210 P260 P280 P303+P361+P353 P305+P351+P338 P310 P501



**Specification**

- Clear liquid

**ACETIC ANHYDRIDE FOR SYNTHESIS (MIN. 99.5 %)**

- Density (20 °C) 1.079 – 1.085 g/ml

**Specification**

- Colour (APHA) max. 10
- Refractive index (20 °C) 1.3856 – 1.3956
- Residue on evaporation max. 100 ppm
- Substances reducing KMnO<sub>4</sub> max. 0.02 %
- Acetic acid (CH<sub>3</sub>COOH) max. 0.5 %
- Chloride (Cl) max. 5 ppm
- Heavy metals (as Pb) max. 2 ppm
- Aluminium (Al) max. 1 ppm
- Iron (Fe) max. 1 ppm
- Identity complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2210.1000

**ACETIC ANHYDRIDE P. A. (MIN. 97.0 %)**

- Density (20 °C) 1.080 – 1.084 g/ml

**Specification**

- Boiling point 136 – 142 °C
- Colour (APHA) max. 20
- Refractive index (20 °C) 1.3881 – 1.3931
- Residue on evaporation max. 30 ppm
- Substances reducing KMnO<sub>4</sub> complies
- Chloride (Cl) max. 5 ppm
- Phosphate (PO<sub>4</sub>) max. 10 ppm
- Heavy metals (as Pb) max. 2 ppm
- Sulphate (SO<sub>4</sub>) max. 5 ppm
- Iron (Fe) max. 5 ppm
- Identity complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2250.1000
2.5 l	Glass bottle	2250.2500



## ACETONE

- $\text{CH}_3\text{COCH}_3$
- M = 58.08 g/mol
- CAS no. 67-64-1
- EC Index no. 606-001-00-8
- EC no. 200-662-2
- Density 0.789 – 0.793 g/ml
- UN-No. 1090
- ADR 3, II

## GHS

- H225 H319 H336 EUH066
- P210 P233 P241 P243 P261 P271 P280 P303+P361+P353 P304+P340 P305+P351+P338 P312 P337+P313 P370+P378 P403+P235 P405 P501



## Specification

- Clear, colourless liquid
- Melting point -94 – -95 °C
- Boiling point 55.6 – 56.6 °C

## ACETONE PURE, TECHNICAL GRADE (MIN. 99.0 %)

### Specification

- Non-volatile substances max. 0.001 %
- Free acid max. 0.005 %
- Heavy metals (as Pb) max. 0.0001 %
- Reducing substances max. 0.0002 %
- Residue on evaporation max. 0.001 %
- Aldehydes max. 0.002 %
- Methanol ( $\text{CH}_3\text{OH}$ ) max. 0.05 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2659.1000
5 l	Plastic canister	2659.5000
25 l	Plastic canister	2659.9025
25 l	Metal drum	2659.6025

## ACETON PURISS., PH. EUR., BP (MIN. 99.5 %)

### Specification

- Assay (GC, on anhydrous basis) 99.5 – 100.0 %
- Identity A, B, C complies
- Appearance of the solution complies
- Acidity or alkalinity complies
- Reducing substances complies
- Relative density 0.790 – 0.793
- Residue on evaporation max. 0.005 % w/w
- Water (KF) max. 0.3 % w/w
- Related substances complies
- Methanol ( $\text{CH}_3\text{OH}$ ) max. 0.05 %
- Isopropanol ( $\text{C}_3\text{H}_7\text{OH}$ ) max. 0.05 %
- Benzene ( $\text{C}_6\text{H}_6$ ) max. 0.0002 % v/v
- Other impurities max. 0.05 %
- Chromium (Cr) max. 0.1 ppm
- Copper (Cu) max. 0.1 ppm
- Iron (Fe) max. 0.1 ppm
- Iridium (Ir) max. 0.1 ppm
- Manganese (Mn) max. 0.1 ppm
- Molybdenum (Mo) max. 0.1 ppm
- Nickel (Ni) max. 0.1 ppm
- Osmium (Os) max. 0.1 ppm
- Palladium (Pd) max. 0.1 ppm
- Platinum (Pt) max. 0.1 ppm
- Rhodium (Rh) max. 0.1 ppm
- Ruthenium (Ru) max. 0.1 ppm
- Vanadium (V) max. 0.1 ppm
- Zinc (Zn) max. 0.1 ppm
- Miscibility with water, alcohol, ether complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2647.1000
2.5 l	Glass bottle	2647.2500
5 l	Plastic canister	2647.5000
25 l	Metal drum	2647.9025



**ACETON P. A., ACS, PH. EUR., BP, USP (MIN. 99.5 %)****Specification**

- Assay (GC, on anhydrous basis) 99.5 – 100.0 %
- Appearance of the solution complies
- Identity (IR) complies
- Insoluble matter in water complies
- Acidity or alkalinity complies
- Relative density 0.790 – 0.793
- Reducing substances complies
- Oxidizing substances complies
- Related substances complies
- Ethanol (C<sub>2</sub>H<sub>5</sub>OH) max. 0.05 %
- Methanol (CH<sub>3</sub>OH) max. 0.05 %
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) max. 0.05 %
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 0.0002 % v/v
- Water (KF) max. 0.3 % w/w
- Residue on evaporation max. 0.004 % w/w
- Other impurities max. 0.05 %
- Chromium (Cr) max. 0.1 ppm
- Copper (Cu) max. 0.1 ppm
- Iron (Fe) max. 0.1 ppm
- Iridium (Ir) max. 0.1 ppm
- Manganese (Mn) max. 0.1 ppm
- Molybdenum (Mo) max. 0.1 ppm
- Nickel (Ni) max. 0.1 ppm
- Osmium (Os) max. 0.1 ppm
- Palladium (Pd) max. 0.1 ppm
- Platinum (Pt) max. 0.1 ppm
- Rhodium (Rh) max. 0.1 ppm
- Ruthenium (Ru) max. 0.1 ppm
- Vanadium (V) max. 0.1 ppm
- Zinc (Zn) max. 0.1 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2654.1000
2.5 l	Glass bottle	2654.2500
5 l	Plastic bottle	2654.5000
5 l	Plastic canister	2654.5010
25 l	Metal drum	2654.9025

**ACETONE P. A. (MIN. 99.8 %)****Specification**

- Colour (APHA) max. 10
- Refractive index (20 °C) 1.3581 – 1.3601
- Water (KF) max. 0.2 %
- Acidity max. 0.0003 meq/g
- Alkalinity max. 0.0006 meq/g
- Aldehydes max. 10 ppm
- Ethanol (C<sub>2</sub>H<sub>5</sub>OH) max. 100 ppm
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) max. 500 ppm
- Methanol (CH<sub>3</sub>OH) max. 500 ppm
- Residue on evaporation max. 10 ppm
- Solubility in water complies
- Substances reducing KMnO<sub>4</sub> max. 2 ppm
- Zinc (Zn) max. 0.01 ppm
- Aluminium (Al) max. 0.5 ppm
- Manganese (Mn) max. 0.02 ppm
- Copper (Cu) max. 0.01 ppm
- Nickel (Ni) max. 0.01 ppm
- Lead (Pb) max. 0.01 ppm
- Iron (Fe) max. 0.1 ppm
- Boron (B) max. 0.02 ppm
- Barium (Ba) max. 0.1 ppm
- Calcium (Ca) max. 0.5 ppm
- Cadmium (Cd) max. 0.05 ppm
- Cobalt (Co) max. 0.05 ppm
- Chromium (Cr) max. 0.02 ppm
- Magnesium (Mg) max. 0.02 ppm
- Tin (Sn) max. 0.1 ppm
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 2 ppm
- Diacetyl (C<sub>4</sub>H<sub>6</sub>O<sub>2</sub>) max. 500 ppm
- Identity (IR) complies
- Related substances (GLC) complies
- Heavy metals (as Pb) max. 0.2 ppm

Quantity	Packaging material	Art. no.
200 l	Metal drum	2680.9200

**ACETONE FOR HPLC (MIN. 99.8 %)****Specification**

- Refractive index (20 °C) 1.357 – 1.361
- Water (KF) max. 500 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- UV transmittance at 330 nm min. 10.0 %
- UV transmittance at 335 nm min. 40.0 %
- UV transmittance at 340 nm min. 75.0 %
- UV transmittance at 345 nm min. 90.0 %
- UV transmittance at 350 nm min. 98.0 %
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2626.1000
2.5 l	Glass bottle	2626.2500
4 l	Glass bottle	2626.4000

## ACETONE FOR RESIDUE ANALYSIS (MIN. 99.8 %)

### Specification

- Refractive index (20 °C) 1.357 – 1.361
- Water (KF) max. 500 mg/kg
- Non-volatile substances max. 2 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- GC-ECD: Peak (lindane) Retention range trichlorobenzene to mirex max. 3 ng/l
- GC-NPD: Peak (ethylparathion) Retention range atrazin to coumaphos max. 3 ng/l
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2661.1000
2.5 l	Glass bottle	2661.2500

## ACETONE FOR PESTICIDE ANALYSIS (MIN. 99.8 %)

### Specification

- Identity complies
- Refractive index (20 °C) 1.357 – 1.361
- Water max. 0.05 %
- Non-volatile substances max. 2 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- GC-ECD: Peak (lindane) max. 3 ng/l
- GC-NPD: Peak (ethylparathion) max. 3 ng/l
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2676.2500

## ACETONE MOS (99.8 – 100.0 %)

### Specification

- Assay (GC, on anhydrous basis) 99.8 – 100.0 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.0005 % w/w
- Water (KF) max. 0.3 % w/w
- Acidity (as CH<sub>3</sub>COOH) max. 0.002 %
- Alkalinity (as NH<sub>3</sub>) max. 0.001 %
- Methanol (CH<sub>3</sub>OH) max. 0.05 %
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) max. 0.05 %
- Chloride (Cl) max. 0.2 ppm
- Phosphate (PO<sub>4</sub>) max. 0.05 ppm
- Heavy metals (as Pb) max. 0.5 ppm
- Dilution test complies
- Silver (Ag) max. 10 ppb
- Aluminium (Al) max. 50 ppb
- Arsenic (As) max. 5 ppb
- Gold (Au) max. 20 ppb
- Boron (B) max. 10 ppb
- Barium (Ba) max. 20 ppb
- Beryllium (Be) max. 10 ppb
- Bismuth (Bi) max. 20 ppb
- Calcium (Ca) max. 25 ppb
- Cadmium (Cd) max. 10 ppb
- Cobalt (Co) max. 10 ppb
- Chromium (Cr) max. 10 ppb
- Copper (Cu) max. 10 ppb
- Iron (Fe) max. 20 ppb
- Gallium (Ga) max. 10 ppb
- Germanium (Ge) max. 10 ppb
- Potassium (K) max. 25 ppb
- Lithium (Li) max. 10 ppb
- Magnesium (Mg) max. 20 ppb
- Manganese (Mn) max. 10 ppb
- Molybdenum (Mo) max. 10 ppb
- Sodium (Na) max. 25 ppb
- Niobium (Nb) max. 30 ppb
- Nickel (Ni) max. 10 ppb
- Lead (Pb) max. 10 ppb
- Antimony (Sb) max. 10 ppb
- Silicon (Si) max. 30 ppb
- Tin (Sn) max. 20 ppb
- Strontium (Sr) max. 10 ppb
- Tantalum (Ta) max. 30 ppb
- Titanium (Ti) max. 10 ppb
- Thallium (Tl) max. 10 ppb
- Vanadium (V) max. 10 ppb
- Zinc (Zn) max. 20 ppb
- Zirconium (Zr) max. 10 ppb
- Particle count >0.5 µm max. 100 P/ml
- Particle count >1.0 µm max. 8 P/ml
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	2670.2500
5 l	Plastic bottle	2670.5000

**ACETONE VLSI (99.8 – 100.0 %)**

**Specification**

- Assay (GC, on anhydrous basis) 99.8 – 100.0 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.0003 % w/w
- Water (KF) max. 0.3 % w/w
- Acidity (as CH<sub>3</sub>COOH) max. 0.002 %
- Alkalinity (as NH<sub>3</sub>) max. 0.001 %
- Chloride (Cl) max. 0.2 ppm
- Phosphate (PO<sub>4</sub>) max. 0.05 ppm
- Aluminium (Al) max. 30 ppb
- Arsenic (As) max. 5 ppb
- Gold (Au) max. 20 ppb
- Boron (B) max. 10 ppb
- Barium (Ba) max. 20 ppb
- Beryllium (Be) max. 10 ppb
- Bismuth (Bi) max. 10 ppb
- Calcium (Ca) max. 25 ppb
- Cadmium (Cd) max. 10 ppb
- Cobalt (Co) max. 10 ppb
- Chromium (Cr) max. 10 ppb
- Copper (Cu) max. 10 ppb
- Iron (Fe) max. 20 ppb
- Gallium (Ga) max. 10 ppb
- Potassium (K) max. 20 ppb
- Lithium (Li) max. 10 ppb
- Magnesium (Mg) max. 10 ppb
- Manganese (Mn) max. 10 ppb
- Molybdenum (Mo) max. 10 ppb
- Sodium (Na) max. 20 ppb
- Niobium (Nb) max. 20 ppb
- Nickel (Ni) max. 10 ppb
- Lead (Pb) max. 10 ppb
- Antimony (Sb) max. 5 ppb
- Silicon (Si) max. 20 ppb
- Tin (Sn) max. 20 ppb
- Strontium (Sr) max. 10 ppb
- Tantalum (Ta) max. 20 ppb
- Titanium (Ti) max. 10 ppb
- Thallium (Tl) max. 10 ppb
- Vanadium (V) max. 10 ppb
- Zinc (Zn) max. 20 ppb
- Zirconium (Zr) max. 10 ppb
- Particle count >0.5 µm max. 80 P/ml
- Particle count >1.0 µm max. 8 P/ml
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
5 l	Plastic bottle	2632.5000

**ACETONITRILE**

- C<sub>2</sub>H<sub>3</sub>N
- M = 41.05 g/mol
- CAS no. 75-05-8
- EC Index no. 608-001-00-3
- EC no. 200-835-2
- Density (20 °C) 0.781 – 0.786 g/ml
- UN-No. 1648
- ADR 3, II

**GHS**

- H225 H302+H312+H332 H319
- P210 P241 P261 P280 P303+P361+P353 P305+P351+P338 P501



**Specification**

- Clear, colourless liquid
- Melting point -45 – -46 °C
- Boiling point 80 – 82.5 °C

**ACETONITRILE P. A. (MIN. 99.8 %)**

**Specification**

- Identity complies
- Refractive index (20 °C) 1.3410 – 1.3450
- Water (KF) max. 500 ppm
- Colour (APHA) max. 10
- Acidity max. 8 µeq/g
- Alkalinity max. 0.6 µeq/g
- Residue on evaporation max. 10 ppm
- Calcium (Ca) max. 0.05 ppm
- Copper (Cu) max. 0.05 ppm
- Iron (Fe) max. 0.2 ppm
- Potassium (K) max. 0.05 ppm
- Magnesium (Mg) max. 0.05 ppm
- Sodium (Na) max. 1 ppm
- Lead (Pb) max. 0.05 ppm
- Zinc (Zn) max. 0.5 ppm
- Litmus paper test conform

Quantity	Packaging material	Art. no.
200 l	Metal drum	2649.9200

**ACETONITRILE FOR HPLC (MIN. 99.9 %)**

**Specification**

- Refractive index (20 °C) 1.342 – 1.346
- Water (KF) max. 300 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- UV transmittance at 197 nm min. 82.0 %
- UV transmittance at 200 nm min. 85.0 %
- UV transmittance at 210 nm min. 90.0 %
- UV transmittance at 220 nm min. 94.0 %
- UV transmittance at 230 nm min. 97.0 %
- UV transmittance at 240 nm min. 98.0 %
- Fluorescence (as quinine) at 254 nm max. 1 ppb
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2637.1000
2.5 l	Glass bottle	2637.2500

## ACETONITRILE ISOCRATIC FOR HPLC (MIN. 99.9 %)

### Specification

- Colour (APHA) max. 10
- Refractive index (20 °C) 1.3420 – 1.3440
- Acidity or alkalinity max. 0.0008 meq/g
- Water (KF) max. 300 ppm
- Residue on evaporation max. 5 ppm
- UV transmittance at 230 nm min. 50.0 %
- UV transmittance at 250 nm min. 98.0 %

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2692.5000

## ACETONITRILE GRADIENT GRADE FOR HPLC (MIN. 99.9 %)

### Specification

- Refractive index (20 °C) 1.342 – 1.346
- Water (KF) max. 300 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- HPLC gradient (peak) at 210 nm max. 5 mAU
- HPLC gradient (peak) at 254 nm max. 0.8 mAU
- UV transmittance at 197 nm min. 82.0 %
- UV transmittance at 200 nm min. 90.0 %
- UV transmittance at 210 nm min. 94.0 %
- UV transmittance at 220 nm min. 96.0 %
- UV transmittance at 230 nm min. 98.0 %
- Fluorescence (as quinine) at 254 nm max. 1 ppb
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2653.1000
2.5 l	Glass bottle	2653.2500

## ACETONITRILE ULTRAGRADIENT GRADE FOR HPLC (MIN. 99.9 %)

### Specification

- Refractive index (20 °C) 1.342 – 1.346
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 2 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- HPLC gradient test complies
- HPLC gradient (peak) at 210 nm max. 2 mAU
- HPLC gradient (peak) at 254 nm max. 0.5 mAU
- UV transmittance at 197 nm min. 85.0 %
- UV transmittance at 200 nm min. 92.0 %
- UV transmittance at 210 nm min. 95.0 %
- UV transmittance at 220 nm min. 98.0 %
- Fluorescence (as quinine) at 254 nm max. 1 ppb
- Gradient baseline drift at 210 nm max. 12 mAU
- UV cut off max. 190 nm
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2685.1000
2.5 l	Glass bottle	2685.2500

## ACETONITRILE FOR LC-MS (MIN. 99.95 %)

### Specification

- Identity (IR) complies
- Refractive index (20 °C) 1.342 – 1.346
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 2 mg/kg
- Free acid max. 0.0005 meq/g
- Free alkali max. 0.0002 meq/g
- UV transmittance at 195 nm min. 80.0 %
- UV transmittance at 200 nm min. 95.0 %
- UV transmittance at 220 nm min. 98.0 %
- UV transmittance at 230 nm min. 99.0 %
- UV cut off max. 190 nm
- HPLC gradient test complies
- HPLC gradient (peak) at 210 nm max. 1 mAU
- HPLC gradient (peak) at 254 nm max. 0.2 mAU
- Fluorescence (as quinine) at 254 nm max. 1 ppb
- Fluorescence (as quinine) at 365 nm max. 0.5 ppb
- Aluminium (Al) max. 0.000005 %
- Iron (Fe) max. 0.000005 %
- Sodium (Na) max. 0.000005 %
- Calcium (Ca) max. 0.000005 %
- Magnesium (Mg) max. 0.000005 %
- Potassium (K) max. 0.000005 %
- Sensitive impurities (reserpine) max. 100 ppb
- Colour (Hazen) max. 10
- Filtered through 0.1 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2697.1000
2.5 l	Glass bottle	2697.2500

**ACETONITRILE FOR UHPLC-MS (99.97 – 100.0 %)**

**Specification**

- Assay (GC, on anhydrous basis) 99.97 – 100.0 %
- Water (KF) max. 0.01 % w/w
- Residue on evaporation max. 0.0001 % w/w
- UHPLC-MS suitability test (reserpine) max. 5 ppb
- Absorption at 190 nm max. 1.00 AU
- Absorption at 195 nm max. 0.07 AU
- Absorption at 200 nm max. 0.02 AU
- Absorption at 205 nm max. 0.01 AU
- Absorption at 210 nm max. 0.01 AU
- Absorption at 220 nm max. 0.008 AU
- Absorption at 254 nm max. 0.005 AU
- Fluorescence (as quinine) at 254 nm max. 0.30 ppb
- Fluorescence (as quinine) at 365 nm max. 0.30 ppb
- Gradient test at 210 nm max. 1 mAU
- Gradient test at 254 nm max. 0.5 mAU
- Acidity max. 0.0002 meq/g
- Alkalinity max. 0.0001 meq/g
- Aluminium (Al) max. 20 ppb
- Calcium (Ca) max. 50 ppb
- Iron (Fe) max. 20 ppb
- Potassium (K) max. 50 ppb
- Magnesium (Mg) max. 20 ppb
- Sodium (Na) max. 100 ppb
- Lead (Pb) max. 20 ppb
- Filtered through 0.1 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2690.1000
2.5 l	Glass bottle	2690.2500

**ACETONITRILE WITH 0.1 % FORMIC ACID FOR LC-MS (MIN. 99.5 %)**

- UN-No. 1993
- ADR 3, II

**GHS**

- H225 H302+H312+H332 H319
- P210 P241 P264 P303+P361+P353 P304+P340 P305+P351+P338 P403+P235 P501



**Specification**

- Clear, colourless liquid
- Colour (APHA) max. 10
- Acidity (as HCOOH) 0.095 – 0.105 %
- HPLC gradient (peak) at 254 nm max. 50 mAU
- UV transmittance at 210 nm min. 5.0 %
- UV transmittance at 230 nm min. 15.0 %
- UV transmittance at 254 nm min. 90.0 %
- Aluminium (Al) max. 0.5 ppm
- Iron (Fe) max. 0.5 ppm
- Calcium (Ca) max. 0.5 ppm
- Magnesium (Mg) max. 0.5 ppm
- Sodium (Na) max. 2 ppm
- Potassium (K) max. 0.5 ppm
- Sensitive impurities (reserpine) max. 50 ppb

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2645.1000
2.5 l	Glass bottle	2645.2500

**ACETONITRILE WITH 0.1 % TRIFLUOROACETIC ACID FOR LC-MS (MIN. 99.9 %)**

- Density (20 °C) 0.78 g/cm<sup>3</sup>
- UN-No. 1648
- ADR 3, II

**GHS**

- H225 H302+H312+H332 H319
- P210 P241 P261 P280 P303+P361+P353 P305+P351+P338 P501



**Specification**

- Clear, colourless liquid
- Melting point -46 °C
- Boiling point 81 °C
- Assay (GC, without TFA) min. 99.9 %
- Trifluoroacetic acid (C<sub>2</sub>HF<sub>3</sub>O<sub>2</sub>) 0.095 – 0.105 % v/v
- Water (KF) max. 150 ppm
- Residue on evaporation max. 2 ppm
- UV transmittance at 195 nm min. 20.0 %
- UV transmittance at 230 nm min. 50.0 %
- UV transmittance at 254 nm min. 90.0 %
- UV transmittance at 260 nm min. 95.0 %
- Fluorescence (as quinine) at 254 nm max. 1 ppb
- Fluorescence (as quinine) at 365 nm max. 0.5 ppb
- HPLC gradient (peak) at 254 nm max. 2 mAU
- Drift at 254 nm max. 30 mAU
- Sensitive impurities (reserpine) max. 50 ppb
- Aluminium (Al) max. 30 ppb
- Iron (Fe) max. 50 ppb
- Sodium (Na) max. 50 ppb
- Calcium (Ca) max. 50 ppb
- Magnesium (Mg) max. 30 ppb
- Potassium (K) max. 50 ppb

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2664.2500

## AGAROSE LOW ELECTROENDOSMOSIS (EEO) (POWDER)

### Specification

- White, fine homogenous powder
- Gel strength (1 %)  $\geq 1200$  g/cm<sup>2</sup>
- Gel strength (1.5 %)  $\geq 2500$  g/cm<sup>2</sup>
- Clarity (1.5 %)  $\leq 3$  NTU
- Gelling temperature (1.5 %)  $36 \pm 1.5$  °C
- Melting temperature (1.5 %)  $88 \pm 1.5$  °C
- EEO 0.05–0.13
- Ash max. 0.4 %
- Moisture max. 10 %
- Sulphate (SO<sub>4</sub>) max. 0.1 %
- DNase/RNase activity none detected

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9953.0500

## AGAROSE STANDARD, FOR ELECTROPHORESIS ROUTINE APPLICATIONS (POWDER)

### Specification

- White, fine homogenous powder
- Gel strength (1 %)  $\geq 1000$  g/cm<sup>2</sup>
- Gel strength (1.5 %)  $\geq 2000$  g/cm<sup>2</sup>
- Clarity (1.5 %)  $\leq 4$  NTU
- Gelling temperature (1.5 %)  $36 \pm 1.5$  °C
- Melting temperature (1.5 %)  $88 \pm 1.5$  °C
- EEO 0.14–0.16
- Ash max. 0.45 %
- Moisture max. 10 %
- Sulphate (SO<sub>4</sub>) max. 0.15 %
- DNase/RNase activity none detected

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9920.0500

## ALUMINIUM POTASSIUM SULPHATE DODECAHYDRATE P. A., ACS, PH. EUR. (MIN. 99.5 %)

- KAl(SO<sub>4</sub>)<sub>2</sub> x 12 H<sub>2</sub>O
- M = 474.39 g/mol
- CAS no. 7784-24-9
- EC no. 233-141-3
- Density 1.75 g/cm<sup>3</sup>

### Specification

- Colourless powder
- Melting point 92.5 °C
- Ammonium (NH<sub>4</sub>) max. 0.005 %
- Arsenic (As) max. 0.0002 %
- Iron (Fe) max. 0.001 %
- Lead (Pb) max. 0.001 %
- Chloride (Cl) max. 0.005 %
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %
- Sodium (Na) max. 0.02 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2620.1000

## AMMONIUM ACETATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)

- (NH<sub>4</sub>)CH<sub>3</sub>COO
- M = 77.08 g/mol
- CAS no. 631-61-8
- EC no. 211-162-9
- Density (20 °C) 1.17 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Melting point 114 °C
- Calcium (Ca) max. 0.001 %
- Cadmium (Cd) max. 0.0002 %
- Copper (Cu) max. 0.0002 %
- Iron (Fe) max. 0.0002 %
- Magnesium (Mg) max. 0.0002 %
- Lead (Pb) max. 0.0002 %
- Zinc (Zn) max. 0.0002 %
- Chloride (Cl) max. 0.0005 %
- Nitrate (NO<sub>3</sub>) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.001 %
- Residue on ignition max. 0.01 %
- pH (5 %, 25 °C) 6.5 – 7.5
- Sulphated ash max. 0.01 %
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2605.1000

**AMMONIUM CHLORIDE P. A., ACS, ISO, PH. EUR. (MIN. 99.8 %)**

- $(\text{NH}_4)\text{Cl}$
- M = 53.49 g/mol
- CAS no. 12125-02-9
- EC Index no. 017-014-00-8
- EC no. 235-186-4
- Density (20 °C) 1.53 g/cm<sup>3</sup>

**GHS**

- H302 H319
- P264 P270 P280 P301+P312  
P305+P351+P338 P337+P313 P501

**Specification**

- Colourless powder
- Melting point 335 °C
- Arsenic (As) max. 0.00005 %
- Calcium (Ca) max. 0.0005 %
- Copper (Cu) max. 0.0002 %
- Iron (Fe) max. 0.0002 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.0005 %
- Sodium (Na) max. 0.005 %
- Nickel (Ni) max. 0.0001 %
- Lead (Pb) max. 0.0001 %
- Zinc (Zn) max. 0.0002 %
- Nitrate ( $\text{NO}_3$ ) max. 0.0005 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0002 %
- Sulphate ( $\text{SO}_4$ ) max. 0.002 %
- pH (5 %, 25 °C) 4.5 – 5.5
- Residue on ignition (650 °C) max. 0.01 %
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2668.1000

**AMMONIUM DIHYDROGEN PHOSPHATE P. A., ACS (MIN. 99.0 %)**

- $(\text{NH}_4)_2\text{H}_2\text{PO}_4$
- M = 115.03 g/mol
- CAS no. 7722-76-1
- EC no. 231-764-5
- Density (20 °C) 1.80 g/cm<sup>3</sup>

**Specification**

- Colourless solid
- Melting point 190 °C (decomposition)
- Insoluble matter max. 0.005 %
- Chloride (Cl) max. 0.0005 %
- Nitrate ( $\text{NO}_3$ ) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.005 %
- Sodium (Na) max. 0.005 %
- pH (5 %, 25 °C) 3.8 – 4.4

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2651.0500

**AMMONIUM HEPTAMOLYBDATE TETRAHYDRATE P. A., PH. EUR., ISO (MIN. 99.0 %)**

- $(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \times 4 \text{H}_2\text{O}$
- M = 1235.86 g/mol
- CAS no. 12054-85-2
- EC no. 234-722-4
- Density (20 °C) 2.498 g/cm<sup>3</sup>

**Specification**

- Colourless solid
- Melting point 90 °C (decomposition)
- Insoluble matter max. 0.005 %
- Chloride (Cl) max. 0.0005 %
- Nitrate ( $\text{NO}_3$ ) max. 0.002 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.0005 %
- Lead (Pb) max. 0.001 %
- Magnesium (Mg) max. 0.02 %
- Silicate ( $\text{SiO}_2$ ) max. 0.001 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	2618.0250
1 kg	Plastic bottle	2618.1000
25 kg	Fiber drum	2618.9025

## AMMONIUM HYDROGEN CARBONATE P. A., BP (MIN. 99.8 %)

- $(\text{NH}_4)\text{HCO}_3$
- M = 79.06 g/mol
- CAS no. 1066-33-7
- EC no. 213-911-5
- Density (20 °C) 1.59 g/cm<sup>3</sup>

### GHS

- H302
- P501



### Specification

- Colourless solid
- Melting point 105 °C
- Residue on ignition max. 0.005 %
- Arsenic (As) max. 0.0003 %
- Iron (Fe) max. 0.0005 %
- Heavy metals (as Pb) max. 0.0005 %
- Copper (Cu) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %

Quantity	Packaging material	Art. no.
5 kg	Plastic bottle	2622.5000

## DI-AMMONIUM HYDROGEN PHOSPHATE P. A., ACS (MIN. 99.0 %)

- $(\text{NH}_4)_2\text{HPO}_4$
- M = 132.06 g/mol
- CAS no. 7783-28-0
- EC no. 231-987-8
- Density (20 °C) 1.62 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Melting point 155 °C (decomposition)
- Insoluble matter max. 0.005 %
- Chloride (Cl) max. 0.0005 %
- Nitrate ( $\text{NO}_3$ ) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.004 %
- Heavy metals (as Pb) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.001 %
- Sodium (Na) max. 0.001 %
- pH (5 %, 25 °C) 7.7 – 8.1
- Calcium (Ca) max. 0.001 %
- Magnesium (Mg) max. 0.0005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2655.0500

## AMMONIUM IRON(II) SULPHATE HEXAHYDRATE P. A., ISO, PH. EUR. (99.0 – 101.0 %)

- $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 \times 6 \text{H}_2\text{O}$
- M = 392.14 g/mol
- CAS no. 7783-85-9
- EC no. 233-151-8
- Density (20 °C) 1.86 g/cm<sup>3</sup>

### Specification

- Greenish powder
- Melting point 100 °C
- Chloride (Cl) max. 0.001 %
- Phosphate ( $\text{PO}_4$ ) max. 0.002 %
- Iron (Fe(III)) max. 0.01 %
- Calcium (Ca) max. 0.01 %
- Copper (Cu) max. 0.002 %
- Potassium (K) max. 0.01 %
- Magnesium (Mg) max. 0.01 %
- Manganese (Mn) max. 0.01 %
- Sodium (Na) max. 0.01 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.003 %
- Insoluble matter max. 0.01 %
- pH (5 % solution) 3.0 – 5.0

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2678.1000





**AMMONIUM NITRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)**

- $(\text{NH}_4)\text{NO}_3$
- M = 80.04 g/mol
- CAS no. 6484-52-2
- EC no. 229-347-8

- Density 1.72 g/cm<sup>3</sup>
- UN-No. 1942
- ADR 5.1, III

**GHS**

- H272
- P210

**Specification**

- Colourless solid
- Melting point 169 °C
- Boiling point 302 °C
- Assay (on anhydrous basis) min. 99 %
- Insoluble matter max. 0.005 %
- Chloride (Cl) max. 0.0003 %
- Nitrite ( $\text{NO}_2$ ) max. 0.0005 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.002 %
- Calcium (Ca) max. 0.003 %
- Magnesium (Mg) max. 0.002 %
- Iron (Fe) max. 0.0002 %
- Residue on ignition max. 0.01 %
- Water max. 5.0 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0001 %
- Chromium (Cr) max. 0.0001 %
- Nickel (Ni) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %
- Sulphated ash max. 0.01 %
- pH (5 %, 25 °C) 4.5 – 6.0

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2667.1000

**AMMONIUM OXALATE MONOHYDRATE P. A., ACS, ISO, PH. EUR. (99.5 – 101.0 %)**

- $(\text{NH}_4)_2\text{C}_2\text{O}_4 \times \text{H}_2\text{O}$
- M = 142.11 g/mol
- CAS no. 6009-70-7
- EC no. 238-135-4

- Density 1.50 g/cm<sup>3</sup>
- UN-No. 2811
- ADR 6.1, III

**GHS**

- H302+H312
- P302+P352

**Specification**

- Colourless solid
- Melting point 70 °C (decomposition)
- Insoluble matter max. 0.005 %
- Chloride (Cl) max. 0.0005 %
- Nitrate ( $\text{NO}_3$ ) max. 0.002 %
- Sulphate ( $\text{SO}_4$ ) max. 0.002 %
- Heavy metals (as Pb) max. 0.0005 %
- Calcium (Ca) max. 0.001 %
- Iron (Fe) max. 0.0002 %
- Potassium (K) max. 0.001 %
- Magnesium (Mg) max. 0.001 %
- Sodium (Na) max. 0.001 %
- Residue on ignition max. 0.02 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2681.1000

**AMMONIUM PEROXODISULPHATE P. A., ACS, PH. EUR. (MIN. 98.0 %)**

- $(\text{NH}_4)_2\text{S}_2\text{O}_8$
- M = 228.20 g/mol
- CAS no. 7727-54-0
- EC Index no. 016-060-00-6
- EC no. 231-786-5

- Density 1.98 g/cm<sup>3</sup>
- UN-No. 1444
- ADR 5.1, III

**GHS**

- H272 H302 H315 H317 H319 H334 H335
- P210 P221 P284 P305+P351+P338 P405 P501

**Specification**

- Colourless solid
- Melting point 120 °C (decomposition)
- Free acid max. 0.04 meq/g
- Chloride (Cl) max. 0.0005 %
- Heavy metals (as Pb) max. 0.001 %
- Iron (Fe) max. 0.001 %
- Manganese (Mn) max. 0.00005 %
- Residue on ignition max. 0.05 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2609.0500
1 kg	Plastic bottle	2609.1000
5 kg	Plastic bottle	2609.5000

## AMMONIA SOLUTION

- CAS no. 1336-21-6
- EC Index no. 007-001-01-2
- EC no. 215-647-6
- Density (20 °C) 0.89 g/ml
- UN-No. 2672
- ADR 8, III

### GHS

- H314 H335 H400
- P260 P271 P273 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P391 P405 P501



### Specification

- Colourless liquid
- Melting point -57 °C
- Boiling point 38 °C

## AMMONIA SOLUTION 25 % W/W P. A., ISO, PH. EUR. (≈250 G NH<sub>3</sub>/KG)

### Specification

- Assay (as NH<sub>3</sub>) min. 25 %
- Non-volatile substances max. 0.002 %
- Silver (Ag) max. 0.000002 %
- Gold (Au) max. 0.00001 %
- Barium (Ba) max. 0.00001 %
- Bismuth (Bi) max. 0.00001 %
- Calcium (Ca) max. 0.0001 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.00001 %
- Chromium (Cr) max. 0.000005 %
- Copper (Cu) max. 0.00001 %
- Iron (Fe) max. 0.00001 %
- Gallium (Ga) max. 0.000002 %
- Indium (In) max. 0.000002 %
- Potassium (K) max. 0.0001 %
- Lithium (Li) max. 0.000002 %
- Magnesium (Mg) max. 0.00005 %
- Manganese (Mn) max. 0.00001 %
- Molybdenum (Mo) max. 0.00001 %
- Sodium (Na) max. 0.0001 %
- Nickel (Ni) max. 0.000005 %
- Lead (Pb) max. 0.000005 %
- Platinum (Pt) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Strontium (Sr) max. 0.0001 %
- Titanium (Ti) max. 0.00001 %
- Thallium (Tl) max. 0.000005 %
- Zinc (Zn) max. 0.00001 %
- Carbonate (CO<sub>3</sub>) max. 0.001 %
- Chloride (Cl) max. 0.00005 %
- Phosphate (PO<sub>4</sub>) max. 0.00005 %
- Sulphate (SO<sub>4</sub>) max. 0.0002 %
- Sulphur (S) max. 0.0002 %
- Reducing substances max. 0.0005 %
- Residue on evaporation max. 0.002 %
- Silicate (SiO<sub>2</sub>) max. 0.001 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2672.1011
2.5 l	Plastic bottle	2672.2511
5 l	Plastic canister	2672.5000
25 l	Plastic canister	2672.9025

## AMMONIA SOLUTION 27.5 % W/W P. A., ISO, PH. EUR. (275 G NH<sub>3</sub>/KG)

### Specification

- Non-volatile substances max. 0.002 %
- Silver (Ag) max. 0.000002 %
- Gold (Au) max. 0.00001 %
- Barium (Ba) max. 0.00001 %
- Bismuth (Bi) max. 0.00001 %
- Calcium (Ca) max. 0.0001 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.00001 %
- Chromium (Cr) max. 0.000005 %
- Copper (Cu) max. 0.00001 %
- Iron (Fe) max. 0.00001 %
- Gallium (Ga) max. 0.000002 %
- Indium (In) max. 0.000002 %
- Potassium (K) max. 0.0001 %
- Lithium (Li) max. 0.000002 %
- Magnesium (Mg) max. 0.00005 %
- Manganese (Mn) max. 0.00001 %
- Molybdenum (Mo) max. 0.00001 %
- Sodium (Na) max. 0.0001 %
- Nickel (Ni) max. 0.000005 %
- Lead (Pb) max. 0.000005 %
- Platinum (Pt) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Strontium (Sr) max. 0.0001 %
- Titanium (Ti) max. 0.00001 %
- Thallium (Tl) max. 0.000005 %
- Zinc (Zn) max. 0.00001 %
- Carbonate (CO<sub>3</sub>) max. 0.001 %
- Chloride (Cl) max. 0.00005 %
- Phosphate (PO<sub>4</sub>) max. 0.00005 %
- Sulphate (SO<sub>4</sub>) max. 0.0002 %
- Sulphur (S) max. 0.0002 %
- Reducing substances max. 0.0005 %
- Residue on evaporation max. 0.002 %
- Silicate (SiO<sub>2</sub>) max. 0.001 %

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2679.5000

### AMMONIUM SULPHATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)

- $(\text{NH}_4)_2\text{SO}_4$
- M = 132.14 g/mol
- CAS no. 7783-20-2
- EC no. 231-984-1
- Density 1.77 g/cm<sup>3</sup>

#### Specification

- Colourless solid
- Melting point 235 °C
- Insoluble matter max. 0.001 %
- Chloride (Cl) max. 0.0003 %
- Nitrate (NO<sub>3</sub>) max. 0.001 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Heavy metals (as Pb) max. 0.0005 %
- Arsenic (As) max. 0.00002 %
- Calcium (Ca) max. 0.001 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0002 %
- Iron (Fe) max. 0.0002 %
- Magnesium (Mg) max. 0.0005 %
- Lead (Pb) max. 0.0002 %
- Zinc (Zn) max. 0.0001 %
- Residue on ignition max. 0.005 %
- Water (KF) max. 0.1 %
- Sulphated ash max. 0.01 %
- pH (5 %, 25 °C) 4.8 – 6.0

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2616.1000
5 kg	Plastic bottle	2616.5000

### AMMONIUM THIOCYANATE PH. EUR., USP, ACS, ISO (MIN. 97.5 %)

- $(\text{NH}_4)\text{SCN}$
- M = 76.12 g/mol
- CAS no. 1762-95-4
- EC Index no. 615-004-00-3
- EC no. 217-175-6

#### GHS

- H302+H312+H332 H412 EUH032
- P261 P280 P312 P501



#### Specification

- White crystals
- Melting point 150 °C
- Identity complies
- Assay (argentometric) min. 97.5 %
- pH (5 %, 25 °C) 4.5 – 6.0
- Insoluble matter in water max. 50 ppm
- Residue on ignition max. 250 ppm
- Reducing iodine max. 0.004 meq/g
- Chloride (Cl) max. 50 ppm
- Sulphate (SO<sub>4</sub>) max. 50 ppm
- Heavy metals (as Pb) max. 5 ppm
- Iron (Fe) max. 3 ppm

Quantity	Packaging material	Art. no.
25 kg	Plastic drum	2635.9025

### AMMONIUM THIOCYANATE SOLUTION ACC. PH. EUR. CHAPTER 4.2.2

- traceable to NIST

#### Specification

- Colourless liquid
- Accuracy (20 °C) ±0.2 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2617.1000



## L-(+)-ASCORBIC ACID PURISS., BP, PH. EUR., USP, E300, FCC10 (MIN. 99.0 %)

- $C_6H_8O_6$
- M = 176.13 g/mol
- CAS no. 50-81-7
- EC no. 200-066-2

### Specification

- White, or almost white crystalline powder
- Melting point 190 °C
- Arsenic (As) max. 3 ppm
- Lead (Pb) max. 2 ppm
- Iron (Fe) max. 2 ppm
- Copper (Cu) max. 5 ppm
- Mercury (Hg) max. 0.1 ppm
- Heavy metals max. 10 ppm
- Impurity C max. 0.15 %
- Impurity D max. 0.15 %
- Impurity E max. 0.2 %
- Unspec. impurities max. 0.1 %
- Total impurities max. 0.2 %
- Loss on drying max. 0.4 %
- Sulfated ash max. 0.1 %
- Methanol max. 3000 ppm
- TAMC max. 1000 cfu/g
- TYMC max. 100 cfu/g
- pH-value (2 %, w/v) 2.4 – 2.8
- pH-value (5 %, w/v) 2.1 – 2.6
- Appearance of solution clear solution, colour max. BY7
- Spec. optical rotation +20.5° – +21.5°

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2652.1000

## BARIUM CARBONATE P. A., ACS, PH. EUR. (MIN. 99.0 %)

- $BaCO_3$
- M = 197.34 g/mol
- CAS no. 513-77-9
- EC Index no. 056-003-00-2
- EC no. 208-167-3
- Density 4.43 g/cm<sup>3</sup>
- UN-No. 1564
- ADR 6.1, III

### GHS

- H302
- P262



### Specification

- Colourless solid
- Melting point >1450 °C (decomposition)
- Insoluble matter max. 0.015 %
- Barium hydroxide ( $Ba(OH)_2$ ) max. 0.015 %
- Calcium (Ca) max. 0.02 %
- Iron (Fe) max. 0.001 %
- Strontium (Sr) max. 0.3 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.002 %
- Nitrate ( $NO_3$ ) max. 0.005 %
- Sulphur (S) max. 0.001 %
- Insoluble matter in hydrochloric acid max. 0.015 %
- Potassium (K) max. 0.005 %
- Sodium (Na) min. 0.02 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2507.1000

## BARIUM CHLORIDE DIHYDRATE P. A., ACS, PH. EUR. (MIN. 99.0 %)

- $BaCl_2 \times 2 H_2O$
- M = 244.28 g/mol
- CAS no. 10326-27-9
- EC Index no. 056-004-00-8
- EC no. 233-788-1
- Density 3.86 g/cm<sup>3</sup>
- UN-No. 1564
- ADR 6.1, III

### GHS

- H301 H332
- P301+P310 P501



### Specification

- Colourless solid
- Melting point 962 °C
- Insoluble matter max. 0.005 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0001 %
- Potassium (K) max. 0.0025 %
- Magnesium (Mg) max. 0.001 %
- Sodium (Na) max. 0.005 %
- Strontium (Sr) max. 0.01 %
- Heavy metals (as Pb) max. 0.0005 %
- Nitrogen (N) max. 0.002 %
- Loss on drying 14.0 – 16.0 %
- pH (5 %, 25 °C) 5.2 – 8.2
- Nitrate ( $NO_3$ ) max. 0.005 %
- Lead (Pb) max. 0.001 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2515.0500
1 kg	Plastic bottle	2515.1000

**BARIUMHYDROXIDE OCTAHYDRATE P. A., ISO, PH. EUR. (MIN. 98.0 %)**

- Ba(OH)<sub>2</sub> x 8 H<sub>2</sub>O
- M = 315.47 g/mol
- CAS no. 12230-71-6
- EC Index no. 056-002-00-7
- EC no. 241-234-5

- Density 2.18 g/cm<sup>3</sup>
- UN-No. 2923
- ADR 6.1, II

**GHS**

- H302+H332 H314
- P280 P301+P330+P331  
P305+P351+P338 P310 P501



**Specification**

- White or colourless solid
- Melting point 78 °C
- Insoluble matter max. 0.005 %
- Barium carbonate (BaCO<sub>3</sub>) max. 2.0 %
- Calcium (Ca) max. 0.005 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0003 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.002 %
- Sodium (Na) max. 0.005 %
- Strontium (Sr) max. 1.5 %
- Lead (Pb) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Sulphur (S) max. 0.0005 %
- Insoluble matter in hydrochloric acid max. 0.005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2502.0500
1 kg	Plastic bottle	2502.1000

**BENZYL ALCOHOL P. A. (MIN. 99.8 %)**

- C<sub>7</sub>H<sub>8</sub>O
- M = 108.14 g/mol
- CAS no. 100-51-6
- EC Index no. 603-057-00-5

- EC no. 202-859-9
- Density (20 °C) ~1.04 g/ml

**GHS**

- H302+H312
- P261 P264 P271 P301+P312 P304+P340  
P330 P501



**Specification**

- Clear liquid
- Boiling point 204.5 – 205.5 °C
- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) ~1.54
- Water (KF) max. 0.1 %
- Total chlorine (Cl<sub>2</sub>) max. 100 ppm
- Benzaldehyde (C<sub>7</sub>H<sub>6</sub>O) max. 0.1 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2510.1000

**N,O-BIS(TRIMETHYLSILYL)ACETAMIDE P. A. (BSA)**

- CH<sub>3</sub>C[NSi(CH<sub>3</sub>)<sub>3</sub>]OSi(CH<sub>3</sub>)<sub>3</sub>
- M = 203.43 g/mol
- CAS no. 10416-59-8
- EC no. 233-892-7

- Density (20 °C) ~0.835 g/ml
- UN-No. 1993
- ADR 8 (3), III

**GHS**

- H226 H302 H314 EUH014
- P210 P241 P280 P303+P361+P353  
P304+P340 P305+P351+P338  
P403+P235 P501



**Specification**

- Clear, yellow liquid
- Boiling point 71 – 73 °C
- Identity complies

Quantity	Packaging material	Art. no.
25 ml	Glass bottle	2607.0025

## N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE P. A. (BSTFA) (MIN. 98.0 %)

- $C_8H_{18}F_3NOSi_2$
- M = 257.39 g/mol
- CAS no. 25561-30-2
- EC no. 247-103-9

- Density (20 °C) max. 0.985 g/ml
- UN-No. 2920
- ADR 8 (3), II

### GHS

- H226 H314
- P210 P241 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P403+P235 P501



### Specification

- Clear, yellow liquid
- Boiling point 45 – 50 °C
- Melting point -10 °C
- Identity complies

Quantity	Packaging material	Art. no.
25 ml	Glass bottle	769.0025

## BORIC ACID P. A., ACS (MIN. 99.5 %)

- $H_3BO_3$
- M = 61.83 g/mol
- CAS no. 10043-35-3
- EC Index no. 005-007-00-2

- EC no. 233-139-2
- Density 1.44 g/cm<sup>3</sup>

### GHS

- H360FD
- P201 P202 P280 P308+P313 P405 P501



### Specification

- Colourless crystals or white crystalline powder
- Melting point 185 °C
- Insoluble matter in water max. 0.01 %
- Insoluble matter in ethanol complies
- Non-volatile substances with methanol max. 0.05 %
- Chloride (Cl) max. 0.0003 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %
- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0001 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2563.1000

## BORIC ACID SOLUTION

- $H_3BO_3$

### BORIC ACID 1 % WITH INDICATOR

- Density 1.00 g/ml

### Specification

- Assay 10 g  $H_3BO_3$  + indicator/l  $H_2O$
- pH 4.80 – 5.00

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2557.5000

### BORIC ACID 2 % W/V WITHOUT INDICATOR

#### Specification

- Assay 1.96 – 2.04 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2544.1000
5 l	Plastic canister	2544.5000
10 l	Plastic canister	2544.9010

**BORIC ACID 4 % W/V WITHOUT INDICATOR****Specification**

- Assay 3.92 – 4.08 %

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2545.5000

**BROMOPHENOL BLUE (MIN. 95.0 %)**

- $C_{19}H_{10}Br_4O_5S$
- M = 669.99 g/mol
- CAS no. 115-39-9
- EC Index no. 204-086-2

**Specification**

- Melting point 273 °C
- Dye content min. 95 %
- Transition range pH 3.0 – 4.6 greenish yellow – blue violet
- Spec. absorptivity (1 %, 1 cm, pH 3.1,  $\lambda_{max}$  436.2 nm) 350 – 385
- Spec. absorptivity (1 %, 1 cm, pH 4.6,  $\lambda_{max}$  591.4 nm) 940 – 1000
- Loss on drying (110 °C, 1 h) max. 1 %
- Solubility (0.1 % in EtOH) clear solution

Quantity	Packaging material	Art. no.
25 g	Plastic bottle	9829.0025

**1,4-BUTANEDIOL (MIN. 99.0 %)**

- $C_4H_{10}O_2$
- CAS no. 110-63-4
- EC no. 203-786-5
- Density (20 °C) 1.015 – 1.016 g/ml

**GHS**

- H302

**Specification**

- Colourless liquid

Quantity	Packaging material	Art. no.
10 l	Plastic canister	2550.9010

**1-BUTANOL P. A. (MIN. 99.5 %)**

- $CH_3(CH_2)_3OH$
- M = 74.12 g/mol
- CAS no. 71-36-3
- EC Index no. 603-004-00-6
- EC no. 200-751-6
- Density 0.81 g/ml
- UN-No. 1120
- ADR 3, III

**GHS**

- H226 H302 H315 H318 H335 H336
- P210 P241 P242 P243 P261 P264 P270 P271 P280 P301+P312 P303+P361+P553 P304+P340 P305+P351+P338 P332+P313 P403+P233 P403+P235 P405 P501

**Specification**

- Colourless liquid
- Boiling point 117 °C
- Refractive index (20 °C) 1.397 – 1.401
- Water (KF) max. 1000 mg/kg
- Non-volatile substances max. 10 mg/kg
- Free acids (as  $CH_3COOH$ ) max. 20 mg/kg
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2513.1000
2.5 l	Glass bottle	2513.2500



Buffer solution



please see pH-buffer in chapter analytical measurement and testing

please see chapter ready-to-use biological buffers

## 2-BUTANOL FOR SYNTHESIS (MIN. 99.0 %)

- $C_4H_{10}O$
- M = 74.12 g/mol
- CAS no. 78-92-2
- EC Index no. 603-127-00-5
- EC no. 201-158-5
- Density (20 °C) 0.801 – 0.811 g/ml
- UN-No. 1120
- ADR 3, II

### GHS

- H226 H319 H335 H316
- P210 P261 P280 P312 P403+P233 P501



### Specification

- Clear liquid
- Boiling point 99 – 100 °C
- Identity complies
- Refractive index (20 °C) 1.3944 – 1.3984
- Colour (APHA) max. 10
- Solubility in water complies
- Water (KF) max. 0.2 %
- Residue on evaporation max. 20 ppm

- Acidity (as  $C_3H_7COOH$ ) max. 20 ppm
- Alkalinity (as NaOH) max. 10 ppm
- Indole ( $C_8H_7N$ ) max. 0.1 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2588.1000

## TERT.-BUTANOL P. A., ACS, PH. EUR., USP (MIN. 99.5 %)

- $C_4H_{10}O$
- M = 74.12 g/mol
- CAS no. 75-65-0
- EC Index no. 603-005-00-1
- EC no. 200-889-7
- Density 0.77 g/ml
- UN-No. 1120
- ADR 3, II

### GHS

- H225 H319 H332 H335
- P210 P261 P280 P312 P403+P233 P501



### Specification

- Clear, colourless liquid or solid
- Melting point 25 – 26 °C
- Boiling point 81.7 – 82.7 °C
- Identity (IR) complies
- Colour (APHA) max. 10
- Water (KF) max. 0.1 %
- Residue on evaporation max. 30 ppm
- Acidity max. 0.001 meq/g

- Carbonyl compounds (as HCHO) max. 0.01 %
- Solubility in water complies
- Alcohol miscibility complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2585.1000

## N-BUTYL ACETATE PURISS. (MIN. 99.0 %)

- $CH_3COO(CH_2)_3CH_3$
- M = 116.16 g/mol
- CAS no. 123-86-4
- EC Index no. 607-025-00-1
- EC no. 204-658-1
- Density 0.88 g/ml
- UN-No. 1123
- ADR 3, III

### GHS

- H226 H336 EUH066
- P210 P241 P243 P261 P271 P303+P361+P353 P304+P340 P312 P403+P233 P501



### Specification

- Colourless liquid
- Melting point -76 °C
- Boiling point 124 – 127 °C
- Non-volatile substances max. 0.001 %
- Free acid max. 0.02 %
- n-Butanol ( $C_4H_{10}O$ ) max. 1.0 %
- Water max. 0.1 %

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2568.2500



**TERT.-BUTYL METHYL ETHER**

- C<sub>5</sub>H<sub>12</sub>O
- M = 88.15 g/mol
- CAS no. 1634-04-4
- EC Index no. 603-181-00-X
- EC no. 216-653-1
- Density (20 °C) 0.74 g/ml
- UN-No. 2398
- ADR 3, II

**GHS**

- H225 H315
- P210 P233 P241 P243 P280
- P303+P361+P353 P332+P313
- P403+P235 P501

**Specification**

- Colourless liquid
- Melting point -108.6 °C
- Boiling point 55 °C

**TERT.-BUTYL METHYL ETHER PURISS. (MIN. 99.0 %)****Specification**

- Water max. 0.05 %
- Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) max. 0.0005 %
- Non-volatile substances max. 0.001 %
- Acidity max. 0.001 meq/g

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2581.2500
5 l	Plastic canister	2581.5000

**TERT.-BUTYL METHYL ETHER P. A. (MIN. 99.8 %)****Specification**

- Refractive index (20 °C) 1.367 – 1.371
- Water (KF) max. 150 mg/kg
- Non-volatile substances max. 10 mg/kg
- Methanol (CH<sub>3</sub>OH) and tert-Butanol (C<sub>4</sub>H<sub>9</sub>OH) max. 0.05 %
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2524.1000
2.5 l	Glass bottle	2524.2500

**TERT.-BUTYL METHYL ETHER FOR HPLC (MIN. 99.8 %)****Specification**

- Colour (Hazen) max. 10
- Refractive index (20 °C) 1.367 – 1.371
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 10 mg/kg
- Methanol (CH<sub>3</sub>OH) and tert-Butanol (C<sub>4</sub>H<sub>9</sub>OH) max. 0.05 %
- UV transmittance at 210 nm min. 10.0 %
- UV transmittance at 230 nm min. 40.0 %
- UV transmittance at 250 nm min. 75.0 %
- UV transmittance at 280 nm min. 92.0 %
- UV transmittance at 300 nm min. 98.0 %
- Hydrocarbons up to C<sub>8</sub> max. 0.05 %
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2529.1000
2.5 l	Glass bottle	2529.2500

**CAESIUM CHLORIDE P. A. (MIN. 99.5 %)**

- CsCl
- M = 168.36 g/mol
- CAS no. 7647-17-8
- EC no. 231-600-2
- Density 3.97 g/cm<sup>3</sup>

**Specification**

- White crystals
- Melting point 646 °C
- Boiling point 1137 – 1382 °C
- Barium (Ba) max. 0.002 %
- Calcium (Ca) max. 0.002 %
- Copper (Cu) max. 0.0002 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.002 %
- Magnesium (Mg) max. 0.0005 %
- Sodium (Na) max. 0.002 %
- Lead (Pb) max. 0.0001 %
- Rubidium (Rb) max. 0.008 %
- Zinc (Zn) max. 0.0002 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.001 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	9715.0100

## CALCIUM ACETATE MONOHYDRATE P. A., FCC, E263 (MIN. 99.0 %)

- $\text{Ca}(\text{CH}_3\text{COO})_2 \times \text{H}_2\text{O}$
- M = 158.17 g/mol
- CAS no. 114460-21-8
- EC no. 200-540-9
- Density 1.50 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Water max. 7.0 %
- Arsenic (As) max. 0.0001 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.002 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Heavy metals (as Pb) max. 0.002 %
- Chloride (Cl) max. 0.03 %
- Fluoride (F) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.05 %
- Reducing substances max. 0.2 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2405.1000

## CALCIUM CARBONATE P. A., ISO (MIN. 99.5 %)

- $\text{CaCO}_3$
- M = 100.09 g/mol
- CAS no. 471-34-1
- EC no. 207-439-9
- Density 2.93 g/cm<sup>3</sup>

### Specification

- Colourless powder
- Melting point 825 °C (decomposition)
- Insoluble matter max. 0.005 %
- Barium (Ba) max. 0.005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.05 %
- Sodium (Na) max. 0.2 %
- Lead (Pb) max. 0.0005 %
- Strontium (Sr) max. 0.05 %
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.001 %
- Insoluble matter in hydrochloric acid max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2414.1000

## CALCIUM CHLORIDE DIHYDRATE P. A. (MIN. 99.5 %)

- $\text{CaCl}_2 \times 2 \text{H}_2\text{O}$
- M = 147.02 g/mol
- CAS no. 10035-04-08
- EC no. 233-140-8
- Density 1.85 g/cm<sup>3</sup>

### GHS

- H302 H319
- P270 P280 P301+P312  
P305+P351+P338 P337+P313 P501



### Specification

- White powder
- Melting point 176 °C
- Ammonium (NH<sub>4</sub>) max. 0.005 %
- Arsenic (As) max. 0.0001 %
- Barium (Ba) max. 0.003 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0003 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Strontium (Sr) max. 0.01 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Nitrate (NO<sub>3</sub>) max. 0.002 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nickel (Ni) max. 0.0001 %
- Chromium (Cr) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %
- pH (50 g/l) 4.5 – 9.5

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2461.0500
1 kg	Plastic bottle	2461.1000
2.5 kg	Plastic bottle	2461.2500

**CALCIUM HYDROXIDE P. A., ACS, PH. EUR. (MIN. 96.0 %)**

- Ca(OH)<sub>2</sub>
- M = 74.10 g/mol
- CAS no. 1305-62-0
- EC no. 215-137-3
- Density 2.24 g/cm<sup>3</sup>

**GHS**

- H315 H318 H335
- P233 P261 P280 P302+P352 P304+P340 P305+P351+P338 P310 P332+P313 P405 P501

**Specification**

- Colourless powder
- Melting point 550 °C
- Boiling point 2850 °C
- Calcium carbonate (CaCO<sub>3</sub>) max. 3.0 %
- Insoluble matter max. 0.03 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.05 %
- Lead (Pb) max. 0.0002 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.05 %
- Strontium (Sr) max. 0.05 %
- Heavy metals (as Pb) max. 0.003 %
- Insoluble matter in hydrochloric acid max. 0.03 %
- Magnesium (Mg) max. 0.5 %
- Potassium (K) max. 0.05 %
- Sodium (Na) max. 0.05 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2495.1000

**CALCIUM NITRATE TETRAHYDRATE P. A., ACS (MIN. 99.0 %)**

- Ca(NO<sub>3</sub>)<sub>2</sub> x 4 H<sub>2</sub>O
- M = 236.15 g/mol
- CAS no. 13477-34-4
- EC no. 233-332-1
- Density 1.82 g/cm<sup>3</sup>
- UN-No. 1454
- ADR 5.1, III

**GHS**

- H272
- P210 P220 P280 P370+P378 P501

**Specification**

- Colourless solid
- Melting point 45 °C
- Ammonium (NH<sub>4</sub>) max. 0.005 %
- Barium (Ba) max. 0.005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.01 %
- Sodium (Na) max. 0.01 %
- Strontium (Sr) max. 0.01 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.002 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- pH (5 %, 25 °C) 5.0 – 7.0
- Insoluble matter max. 0.005 %
- Nitrite (NO<sub>2</sub>) max. 0.001 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2445.0500
1 kg	Plastic bottle	2445.1000

**CALCIUM SULPHATE DIHYDRATE P. A., ACS (MIN. 99.0 %)**

- CaSO<sub>4</sub> x 2 H<sub>2</sub>O
- M = 172.17 g/mol
- CAS no. 10101-41-4
- EC no. 231-900-3
- Density 2.32 g/cm<sup>3</sup>

**Specification**

- Colourless to white solid
- Insoluble matter max. 0.02 %
- Free acid max. 0.01 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.002 %
- Magnesium (Mg) max. 0.002 %
- Sodium (Na) max. 0.02 %
- Lead (Pb) max. 0.0002 %
- Zinc (Zn) max. 0.0005 %
- Carbonate (CO<sub>3</sub>) max. 0.005 %
- Chloride (Cl) max. 0.002 %
- Nitrate (NO<sub>3</sub>) max. 0.005 %
- Insoluble matter in hydrochloric acid max. 0.02 %
- Heavy metals (as Pb) max. 0.002 %
- Strontium (Sr) max. 0.05 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2403.0500
1 kg	Plastic bottle	2403.1000

## CERIC AMMONIUM NITRATE (MIN. 98.0 %)

- $CeH_8N_8O_{18}$
- M = 548.26 g/mol
- CAS no. 16774-21-3
- EC no. 240-827-6
- Density (20 °C) 2.50 g/cm<sup>3</sup>
- UN-No. 3085
- ADR 5.1 (8), II

### GHS

- H272 H290 H302 H314 H317 H410
- P210 P260 P273 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P308+P311 P390 P501



### Specification

- Orange, crystalline solid
- Melting point >200 °C (decomposition)
- Residual moisture max. 2 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2699.0500

## CERIUM SULPHATE SOLUTION 0.1 MOL/L ACC. PH. EUR CHAPTER 4.2.2 (0.1 M)

- traceable to NIST
- UN-No. 2796
- ADR 8, II

### GHS

- H315 H319
- P264 P280 P305+P351+P338 P332+P313 P362+P364 P337+P313



### Specification

- Liquid
- Assay 0.0997 – 0.1003 M

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2419.1011

## CHLOROBENZENE FOR SYNTHESIS (MIN. 99.9 %)

- $C_6H_5Cl$
- M = 112.56 g/mol
- CAS no. 108-90-7
- EC Index no. 602-033-00-1
- EC no. 203-628-5
- Density (20 °C) 1.103 – 1.109
- UN-No. 1134
- ADR 3, III

### GHS

- H226 H332 H411
- P210 P241 P273 P303+P361+P353 P304+P340 P403+P235 P501



### Specification

- Clear, yellowish liquid
- Melting point -45 °C
- Boiling point 131.5 – 132.5 °C
- Identity complies
- Titratable base complies
- Refractive index (20 °C) 1.5198 – 1.5298
- Benzene ( $C_6H_6$ ) max. 200 ppm
- Water (KF) max. 500 ppm
- Free acid (HCl) max. 10 ppm
- Residue on evaporation max. 50 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2467.1000



**CHLOROFORM**

- $\text{CHCl}_3$
- M = 119.38 g/mol
- CAS no. 67-66-3
- EC Index no. 602-006-00-4
- EC no. 200-663-8
- Density (20 °C) 1.479 – 1.483 g/ml
- UN-No. 1888
- ADR 6.1, III

**GHS**

- H302 H315 H319 H331 H351 H361d H372
- P201 P260 P280 P304+P340 P308+P313 P403+P233 P501

**CHLOROFORM P. A., ISO, PH. EUR. (MIN. 99.5 % (STAB.))**

- Colourless liquid
- Melting point -63 °C
- Boiling point 61 – 61.5 °C

**Specification**

- Non-volatile substances max. 0.0005 %
- Water max. 0.01 %
- Free acid max. 0.00005 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.000005 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Chloride (Cl) max. 0.0001 %
- Free chlorine ( $\text{Cl}_2$ ) max. 0.00001 %
- Aldehydes and ketones max. 0.005 %
- Carbonyl compounds (as CO) max. 0.005 %
- Dichloromethane ( $\text{CH}_2\text{Cl}_2$ ) max. 0.01 %
- Tetrachloromethane ( $\text{CCl}_4$ ) max. 0.01 %
- Tetrachloroethylene ( $\text{C}_2\text{Cl}_4$ ) max. 0.01 %
- Trichloroethylene ( $\text{C}_2\text{HCl}_3$ ) max. 0.01 %
- Stabilized with amylene

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2475.1000
2.5 l	Glass bottle	2475.2500
25 l	Metal drum	2475.9025

**CHLOROFORM FOR HPLC (MIN. 99.9 % (STAB.))****Specification**

- Identity complies
- Refractive index (20 °C) 1.444 – 1.448
- Water (KF) max. 100 ppm
- Residue on evaporation max. 5 ppm
- Acidity max. 0.0005 meq/g
- Alkalinity max. 0.0002 meq/g
- UV Transmittance at 250 nm min. 50.0 %
- UV Transmittance at 260 nm min. 90.0 %
- UV Transmittance at 275 nm min. 98.0 %
- Dichloromethane ( $\text{CH}_2\text{Cl}_2$ ) max. 50 ppm
- Tetrachloromethane ( $\text{CCl}_4$ ) max. 100 ppm
- Stabilized with ethanol (0.6 – 1.0 %)
- Filtered through 0.2  $\mu\text{m}$

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2476.2500

**CHROMIUM(III) CHLORIDE HEXAHYDRATE P. A. (MIN. 98.0 %)**

- $\text{CrCl}_3 \times 6 \text{H}_2\text{O}$
- M = 266.45 g/mol
- CAS no. 10060-12-5
- EC no. 233-038-3
- Density 2.76 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

**GHS**

- H290 H302 H317 H411
- P260 P262 P280 P301+P312 P302+P352 P390

**Specification**

- Green solid
- Melting point 95 °C
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.03 %
- Lead (Pb) max. 0.005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.05 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2407.1000

## CITRIC ACID MONOHYDRATE

- $C_6H_8O_7 \cdot x H_2O$
- M = 210.14 g/mol
- CAS no. 5949-29-1
- EC no. 201-069-1
- Density (20 °C) 1.54 g/cm<sup>3</sup>

### GHS

- H319
- P264 P280 P305+P351+P338  
P337+P313



### Specification

- Fine, colourless crystals or white powder
- Melting point 135 – 153 °C

## CITRIC ACID MONOHYDRATE PURISS., PH. EUR., E330 (MIN. 99.5 %)

### Specification

- Assay (calculated on anhydrous substance) 99.5 – 100.5 %
- Identity complies
- Appearance of solution complies
- Water (KF) 7.5 – 9.0 %
- Sulphate (SO<sub>4</sub>) max. 150 ppm
- Oxalate (as H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>) max. 100 ppm
- Sulphated ash (800 ±25 °C) max. 0.1 %
- Readily carbonisable substances complies
- Heavy metals (as Pb) max. 5 ppm

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2417.1000

## CITRIC ACID MONOHYDRATE P. A. (MIN. 99.5 %)

### Specification

- Insoluble matter in water max. 0.005 %
- Residue on ignition (as SO<sub>4</sub>) max. 0.03 %
- Substances darkened by H<sub>2</sub>SO<sub>4</sub> complies
- Chloride (Cl) max. 0.001 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Total sulphur (as SO<sub>4</sub>) max. 0.01 %
- Heavy metals (as Pb) max. 0.0005 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2432.1000

## CITRIC ACID SOLUTION 50 % (49.0 – 51.0 %)

- $C_6H_8O_7$
- GHS
- H319
- P264 P280 P305+P351+P338  
P337+P313



### Specification

- Clear, almost colourless liquid
- Heavy metals (as Pb) max. 5 mg/kg
- Mercury (Hg) max. 1 mg/kg
- Lead (Pb) max. 0.5 mg/kg
- Arsenic (As) max. 1 mg/kg
- Calcium (Ca) max. 100 mg/kg
- Magnesium (Mg) max. 50 mg/kg
- Chloride (Cl) max. 50 mg/kg
- Sulphate (SO<sub>4</sub>) max. 100 mg/kg
- Oxalic acid/Oxalate max. 100 mg/kg
- Transmittance at 450 nm min. 98.0 %
- Absorption at 405 nm max. 0.015 %
- Sulphate ash max. 0.05 %

Quantity	Packaging material	Art. no.
25 kg	Plastic canister	2425.9025

**COBALT(II) CHLORIDE HEXAHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)**

- $\text{CoCl}_2 \times 6 \text{H}_2\text{O}$
- M = 237.93 g/mol
- CAS no. 7791-13-1
- EC Index no. 027-004-00-5
- EC no. 231-589-4

- Density 1.92 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

**GHS**

- H302 H317 H334 H341 H350 H360 H410
- P201 P273 P280 P304+P340 P308+P313 P501



**Specification**

- Red solid
- Melting point 56 °C
- Ammonium ( $\text{NH}_4$ ) max. 0.002 %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.002 %
- Potassium (K) max. 0.01 %
- Magnesium (Mg) max. 0.005 %
- Manganese (Mn) max. 0.01 %
- Sodium (Na) max. 0.05 %
- Nickel (Ni) max. 0.05 %
- Lead (Pb) max. 0.003 %
- Zinc (Zn) max. 0.002 %
- Nitrate ( $\text{NO}_3$ ) max. 0.01 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Insoluble matter max. 0.005 %
- Substances not precipitated by ammonium sulfide max. 0.25 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	2442.0100

**COPPER(II) CHLORIDE ANHYDROUS PURISS. (MIN. 98.0 %)**

- $\text{CuCl}_2$
- M = 134.45 g/mol
- CAS no. 7447-39-4
- EC no. 231-210-2

- Density 3.39 g/cm<sup>3</sup>
- UN-No. 2802
- ADR 8, III

**GHS**

- H302 H315 H319 H410
- P260 P273 P302+P352 P305+P351+P338



**Specification**

- Green solid
- Melting point 630 °C (decomposition)
- Water max. 1 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	2485.0500

**COPPER(II) CHLORIDE DIHYDRATE**

- $\text{CuCl}_2 \times 2 \text{H}_2\text{O}$
- M = 170.48 g/mol
- CAS no. 10125-13-0
- EC no. 231-210-2

- Density 2.51 – 2.54 g/cm<sup>3</sup>
- UN-No. 2802
- ADR 8, III

**GHS**

- H302 H315 H319 H410
- P260 P273 P302+P352 P305+P351+P338 P501



**Specification**

- Blue-green solid
- Melting point 110 °C

**COPPER(II) CHLORIDE DIHYDRATE PURISS. (MIN. 99.0 %)**

**Specification**

- Arsenic (As) max. 0.0005 %
- Calcium (Ca) max. 0.01 %
- Iron (Fe) max. 0.005 %
- Potassium (K) max. 0.01 %
- Magnesium (Mg) max. 0.01 %
- Sodium (Na) max. 0.02 %
- Sulphate ( $\text{SO}_4$ ) max. 0.01 %
- Nitrogen (N) max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2420.1000

## COPPER(II) CHLORIDE DIHYDRATE P. A. (MIN. 99.0 %)

### Specification

- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.002 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.002 %
- Magnesium (Mg) max. 0.002 %
- Sodium (Na) max. 0.002 %
- Nickel (Ni) max. 0.005 %
- Lead (Pb) max. 0.004 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.004 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2435.1000

## COPPER(II) SULPHATE PENTAHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)

- CuSO<sub>4</sub> x 5 H<sub>2</sub>O
- M = 249.68 g/mol
- CAS no. 7758-99-8
- EC Index no. 029-023-00-4
- EC no. 231-847-6
- Density 2.285 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

### GHS

- H302 H318 H410
- P273 P280 P302+P352 P305+P351+P338 P501



### Specification

- Blue solid
- Arsenic (As) max. 0.00005 %
- Calcium (Ca) max. 0.001 %
- Cadmium (Cd) max. 0.001 %
- Cobalt (Co) max. 0.001 %
- Iron (Fe) max. 0.002 %
- Potassium (K) max. 0.001 %
- Magnesium (Mg) max. 0.0005 %
- Sodium (Na) max. 0.002 %
- Nickel (Ni) max. 0.002 %
- Lead (Pb) max. 0.002 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Nitrogen (N) max. 0.001 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2479.1000

## CYCLOHEXANE

- C<sub>6</sub>H<sub>12</sub>
- M = 84.16 g/mol
- CAS no. 110-82-7
- EC Index no. 601-017-00-1
- EC no. 203-806-2
- Density 0.775 – 0.782 g/ml
- UN-No. 1145
- ADR 3, II

### GHS

- H225 H304 H315 H336 H410
- P210 P240 P273 P280 P301+P310 P302+P352 P331 P403+P233 P501



### Specification

- Colourless liquid
- Melting point 6 – 7 °C
- Boiling point 80 – 81 °C

## CYCLOHEXANE P. A., ACS, ISO (MIN. 99.5 %)

### Specification

- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Free acid max. 0.001 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Aromatic compounds max. 0.05 %
- Cyclohexene (C<sub>6</sub>H<sub>10</sub>) max. 0.05 %
- Benzene (C<sub>6</sub>H<sub>6</sub>) min. 0.05 %
- Carbonyl compounds (as CO) complies
- Readily carbonisable substances complies
- Colour (APHA) max. 10
- Residue on evaporation max. 0.002 %
- Substances darkened by H<sub>2</sub>SO<sub>4</sub> complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2483.1000
2.5 l	Glass bottle	2483.2500



Dehydrated culture media → see page 319 f.



**CYCLOHEXANE FOR RESIDUE ANALYSIS (MIN. 99.8 %)****Specification**

- Refractive index (20 °C) 1.424 – 1.428
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 2 mg/kg
- GC-ECD: Peak (lindane) Retention range trichlorobenzene to mirex max. 3 ng/l
- GC-NPD: Peak (ethylparathion) Retention range atrazin to coumaphos max. 3 ng/l
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2429.2500

**CYCLOHEXANE FOR PESTICIDE ANALYSIS (MIN. 99.8 %)****Specification**

- Identity complies
- Refractive index (20 °C) 1.424 – 1.428
- Water max. 100 ppm
- Non-volatile substances max. 2 ppm
- GC-ECD: Peak (lindane) max. 3 ng/l
- GC-NPD: Peak (ethylparathion) max. 3 ng/l
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2448.2500

**CYCLOHEXANONE FOR SYNTHESIS (MIN. 99.5 %)**

- C<sub>6</sub>H<sub>10</sub>O
- M = 98.15 g/mol
- CAS no. 108-94-1
- EC Index no. 606-010-00-7
- EC no. 203-631-1
- Density (20 °C) 0.941 – 0.951 g/ml
- UN-No. 1915
- ADR 3, III

**GHS**

- H226 H332
- P210 P261 P312

**Specification**

- Clear, colourless liquid
- Melting point -26 °C
- Boiling point 152 – 157 °C
- Identity complies
- Refractive index (20 °C) 1.4477 – 1.4537
- Residue on evaporation max. 500 ppm
- Water (KF) max. 0.1 %
- Aldehydes (as HCHO) max. 0.1 %
- Cyclohexanol (C<sub>6</sub>H<sub>11</sub>OH) max. 0.1 %
- Heavy metals (as Pb) max. 2 ppm
- Iron (Fe) max. 10 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2489.1000
2.5 l	Glass bottle	2489.2500

**CYCLOPENTYLMETHYLETHER FOR SYNTHESIS, PURE (MIN. 99.9 %)**

- C<sub>6</sub>H<sub>12</sub>O
- M = 100.16 g/mol
- CAS no. 5614-37-9
- Density (20 °C) 0.86 g/cm<sup>3</sup>
- UN-No. 3271
- ADR 3, II

**GHS**

- H225 H302 H315 H319
- P210 P243 P280 P303+P361+P353 P305+P351+P338 P403+P235 P501

**Specification**

- Colourless liquid
- Melting point < -140 °C
- Boiling point 106 °C
- Refractive index (20 °C) 1.4199 – 1.4219
- Water (KF) max. 100 mg/kg
- Colour (Hazen) max. 10
- Peroxides max. 50 meq/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2497.1000
5 l	Plastic canister	2497.5000



More information about Green Solvents → see page 355

## 1,2-DICHLOROETHANE

- $C_2H_4Cl_2$
- M = 98.96 g/mol
- CAS no. 107-06-2
- EC Index no. 602-012-00-7
- EC no. 203-458-1
- Density (20 °C) 1.248 – 1.264 g/ml
- UN-No. 1184
- ADR 3 (6.1), II

### GHS

- H225 H302 H315 H319 H335 H350
- P210 P241 P264 P303+P361+P353  
P304+P340 P305+P351+P338  
P403+P235 P501



### Specification

- Clear liquid
- Melting point -36 °C
- Boiling point 83.0 – 84.0 °C

## 1,2-DICHLOROETHANE PH. EUR., USP, ACS, FOR SYNTHESIS (MIN. 99.8 %)

### Specification

- Identity complies
- Colour (APHA) max. 20
- Refractive index (20 °C) 1.4398 – 1.4498
- Water (KF) max. 300 ppm
- Residue on evaporation max. 50 ppm
- Acidity (as HCl) max. 10 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2331.1000

## 1,2-DICHLOROETHANE P. A. (MIN. 99.8 %)

### Specification

- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.4418 – 1.4478
- Acidity max. 0.0003 meq/g
- Water (KF) max. 200 ppm
- Residue on evaporation max. 10 ppm
- Free chlorine ( $Cl_2$ ) max. 1 ppm
- Total phosphorus (P) max. 0.5 ppm
- Substances reducing  $KMnO_4$  max. 10 ppm
- Total silicon (Si) max. 0.05 ppm
- Total sulphur (S) max. 0.5 ppm
- Calcium (Ca) max. 0.5 ppm
- Copper (Cu) max. 0.05 ppm
- Iron (Fe) max. 0.1 ppm
- Potassium (K) max. 0.2 ppm
- Magnesium (Mg) max. 0.1 ppm
- Sodium (Na) max. 0.5 ppm
- Lead (Pb) max. 0.02 ppm
- Zinc (Zn) max. 0.2 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2335.1000

## DICHLOROMETHANE

- $CH_2Cl_2$
- M = 84.93 g/mol
- CAS no. 75-09-2
- EC Index no. 602-004-00-3
- EC no. 200-838-9
- Density (20 °C) 1.32 – 1.33 g/ml
- UN-No. 1593
- ADR 6.1, III

### GHS

- H351
- P201 P202 P280 P308+P313 P405 P501



### Specification

- Colourless liquid
- Melting point -95 °C
- Boiling point 39 – 40 °C

## DICHLOROMETHANE P. A., ACS, ISO (MIN. 99.8 % (STAB.))

### Specification

- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Free acid max. 0.001 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Chloride (Cl) max. 0.00005 %
- Free chlorine ( $Cl_2$ ) max. 0.00002 %
- Chloroform ( $CHCl_3$ ) max. 0.01 %
- Formaldehyde (HCHO) max. 0.0005 %
- Tetrachloromethane ( $CCl_4$ ) max. 0.01 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.002 %
- Acidity max. 0.0003 meq/g
- Stabilized with amylene

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2371.1000
2.5 l	Glass bottle	2371.2500
25 l	Metal drum	2371.9025

**DICHLOROMETHANE FOR HPLC (MIN. 99.9 % (STAB.))****Specification**

- Refractive index (20 °C) 1.422 – 1.426
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as HCl) max. 5 mg/kg
- UV transmittance at 240 nm min. 60.0 %
- UV transmittance at 250 nm min. 92.0 %
- UV transmittance at 255 nm min. 96.0 %
- Colour (Hazen) max. 10
- Stabilized with amylene 30 – 60 mg/kg
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2356.1000
2.5 l	Glass bottle	2356.2500

**DICHLOROMETHANE FOR RESIDUE ANALYSIS (MIN. 99.9 % (STAB.))****Specification**

- Assay (without stabilizer) min. 99.9 %
- Refractive index (20 °C) 1.422 – 1.426
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as HCl) max. 5 mg/kg
- GC-ECD: Peak (lindane) Retention range trichlorobenzene to mirex max. 3 ng/l
- Colour (Hazen) max. 10
- PAH test acc. ISO 17993 complies
- Stabilized with ethanol 0.1 – 0.4 % m/m

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2311.2500

**DICHLOROMETHANE FOR PESTICIDE ANALYSIS (MIN. 99.9 % (STAB.))****Specification**

- Identity complies
- Water max. 0.01 %
- Non-volatile substances max. 5 mg/kg
- Free acids (as HCl) max. 5 mg/kg
- GC-ECD: Peak (lindane) max. 3 ng/l
- GC-NPD: Peak (ethylparathion) max. 3 ng/l
- Colour (Hazen) max. 10
- PAH test acc. ISO 17993 complies
- Stabilized with amylene 30 – 50 mg/kg

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2333.2500

**DIETHANOLAMINE**

- $C_4H_{11}NO_2$
- M = 105.14 g/mol
- CAS no. 111-42-2
- EC Index no. 603-071-00-1
- EC no. 203-868-0

**GHS**

- H302 H314 H335 H373 H412
- P260 P273 P280 P305+P351+P338 P314 P332+P313 P501

**Specification**

- Clear, colourless liquid
- Melting point 27.8 – 28.3 °C
- Boiling point 269 °C

**DIETHANOLAMINE FOR SYNTHESIS (MIN. 99.0 %)****Specification**

- Identity complies
- Assay (alkalimetric) min. 99.0 %
- Refractive index (30 °C) 1.4723 – 1.4783
- Water max. 0.5 %
- Monoethanolamine ( $C_2H_7NO$ ) max. 0.5 %
- Residue on ignition max. 50 ppm
- Triethanolamine ( $C_6H_{15}NO_3$ ) max. 0.5 %
- Relative density (30 °C) 1.085 – 1.091

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2348.1000

**DIETHANOLAMINE P. A. (MIN. 99.0 %)****Specification**

- Identity complies
- Refractive index (30 °C) 1.4723 – 1.4783
- Water max. 0.5 %
- Monoethanolamine ( $C_2H_7NO$ ) max. 0.5 %
- Residue on ignition max. 50 ppm
- Triethanolamine ( $C_6H_{15}NO_3$ ) max. 0.5 %
- Relative density (30 °C) 1.085 – 1.091

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2340.1000

## DIETHYLAMINE

- $C_4H_{11}N$
- $M = 73.14 \text{ g/mol}$
- CAS no. 109-89-7
- EC Index no. 612-003-00-X
- EC no. 203-716-3
- Density (20 °C) 0.705 – 0.708 g/ml
- UN-No. 1154
- ADR 8 (3), II

### GHS

- H225 H302+H332 H311 H314 H335
- P210 P241 P264 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P403+P235 P501



### Specification

- Clear, colourless liquid
- Boiling point 55 – 56 °C

## DIETHYLAMINE FOR SYNTHESIS (MIN. 99.0 %)

### Specification

- Identity complies
- Refractive index (20 °C) 1.3840 – 1.3900
- Water (KF) max. 0.2 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2358.1000

## DIETHYLAMINE P. A. (MIN. 99.0 %)

### Specification

- Identity complies
- Refractive index (20 °C) 1.3840 – 1.3900
- Residue on evaporation max. 50 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2343.1000

## DIETHYLENE GLYCOL FOR SYNTHESIS (MIN. 99.0 %)

- $C_4H_{10}O_3$
- $M = 106.12 \text{ g/mol}$
- CAS no. 111-46-6
- EC Index no. 603-140-00-6
- EC no. 203-872-2
- Density (20 °C) 1.112 – 1.122 g/ml

### GHS

- H302
- P264 P270 P301+P312 P330



### Specification

- Clear, colourless liquid
- Boiling point 240 – 252 °C
- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.4425 – 1.4525
- Water max. 0.3 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2361.1000



**DIETHYL ETHER P. A., PH. EUR. (MIN. 99.5 % (STAB.))**

- $(C_2H_5)_2O$
- M = 74.12 g/mol
- CAS no. 60-29-7
- EC Index no. 603-022-00-4
- EC no. 200-467-2
- Density 0.714 – 0.716 g/ml
- UN-No. 1155
- ADR 3, I

**GHS**

- H224 H302 H336 EUH019 EUH066
- P210 P241 P260 P303+P361+P353 P304+P340 P403+P235 P501

**Specification**

- Colourless liquid
- Melting point -116.3 °C
- Boiling point 34.0 – 35.0 °C
- Identity (IR) complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.350 – 1.354
- Water (KF) max. 200 ppm
- Residue on evaporation max. 10 ppm
- Ethanol ( $C_2H_5OH$ ) max. 100 ppm
- Methanol ( $CH_3OH$ ) max. 200 ppm
- Peroxides (as  $H_2O_2$ ) complies
- Heavy metals (as Pb) max. 1 ppm
- Aluminium (Al) max. 0.5 ppm
- Calcium (Ca) max. 0.5 ppm
- Cadmium (Cd) max. 0.05 ppm
- Cobalt (Co) max. 0.02 ppm
- Chromium (Cr) max. 0.02 ppm
- Copper (Cu) max. 0.02 ppm
- Iron (Fe) max. 0.1 ppm
- Magnesium (Mg) max. 0.1 ppm
- Manganese (Mn) max. 0.02 ppm
- Nickel (Ni) max. 0.02 ppm
- Lead (Pb) max. 0.05 ppm
- Tin (Sn) max. 0.1 ppm
- Zinc (Zn) max. 0.1 ppm
- Stabilized with BHT approx. 6 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2362.1000
2.5 l	Glass bottle	2362.2500
5 l	Metal canister	2362.5000

**DIISOPROPYL ETHER P. A. (MIN. 98.5 % )**

- $C_6H_{14}O$
- M = 102.18 g/mol
- CAS no. 108-20-3
- EC Index no. 603-045-00-X
- EC no. 203-560-6
- Density (20 °C) 0.719 – 0.729 g/ml
- UN-No. 1159
- ADR 3, II

**GHS**

- H225 H336 EUH019 EUH066
- P210 P261 P312 P403+P233 P501

**Specification**

- Clear, colourless liquid
- Boiling point 66.5 – 69.5 °C
- Identity (IR) complies
- Peroxides (as  $H_2O_2$ ) max. 5 ppm
- Water (KF) max. 0.1 %
- Alcohol miscibility complies
- Chloroform miscibility complies
- Diethyl ether miscibility complies
- Stabilized with BHT 10 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2351.1000
5 l	Plastic canister	2351.5000

**N,N-DIMETHYLACETAMIDE HEADSPACE GRADE (MIN. 99.99 %)**

- $C_4H_9NO$
- M = 87.12 g/mol
- CAS no. 127-19-5
- EC Index no. 616-011-00-4
- EC no. 204-826-4
- Density 0.937 g/ml

**GHS**

- H312+H332 H360D
- P201 P261 P280 P308+P313

**Specification**

- Clear, colourless liquid
- Melting point -20 °C
- Boiling point 164 – 166 °C
- Assay (GC, on anhydrous basis) 99.99 – 100 %
- Refractive index (20 °C) 1.436 – 1.438
- Acidity (as  $CH_3COOH$ ) max. 0.003 %
- Water (KF) max. 0.02 % w/w
- UV cut off 190 – 268 nm
- GC-Headspace complies
- UV transmittance at 268 nm min. 10 %
- UV transmittance at 275 nm min. 55 %
- UV transmittance at 300 nm min. 85 %
- UV transmittance at 350 nm min. 98 %
- UV transmittance at 400 nm min. 99 %
- Filled under inert gas

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2345.1000

## N,N-DIMETHYLFORMAMIDE

- $C_3H_7NO$
- $M = 73.10$  g/mol
- CAS no. 68-12-2
- EC Index no. 616-001-00-X
- EC no. 200-679-5
- Density 0.945 – 0.952 g/ml
- UN-No. 2265
- ADR 3, III

### GHS

- H226 H312+H332 H319 H360D
- P201 P210 P261 P280 P308+P313 P501



### Specification

- Clear, colourless liquid

## N,N-DIMETHYLFORMAMIDE P. A. (MIN. 99.9 %)

### Specification

- Boiling point 152 – 153.5 °C
- Refractive index (20 °C) 1.428 – 1.432
- Water (KF) max. 300 mg/kg
- Non-volatile substances max. 20 mg/kg
- Free acids (as HCOOH) max. 20 mg/kg
- Free alkali (as  $HN(CH_3)_2$ ) max. 20 mg/kg
- Methanol ( $CH_3OH$ ) max. 100 mg/kg
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2385.2500

## N,N-DIMETHYLFORMAMIDE HEADSPACE GRADE (MIN. 99.98 %)

### Specification

- Melting point -61 °C
- Boiling point 153 °C
- Assay (GC, on anhydrous basis) 99.98 – 100 %
- Water (KF) max. 0.025 % w/w
- GC-Headspace complies
- Colour (APHA) max. 10
- Absorption at 275 nm max. 0.25 AU
- Absorption at 290 nm max. 0.15 AU
- Absorption at 300 nm max. 0.07 AU
- Absorption at 320 nm max. 0.02 AU
- Absorption at 350 – 400 nm max. 0.01 AU
- Methanol ( $CH_3OH$ ) not detected
- Filled under inert gas

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2350.1000

## 1,3-DIMETHYL-2-IMIDAZOLIDINONE HEADSPACE GRADE (MIN. 99.5 %)

- $C_5H_{10}N_2O$
- $M = 114.15$  g/mol
- CAS no. 80-73-9
- EC no. 201-304-8
- Density 1.040 g/ml
- UN-No. 2810
- ADR 6.1, III

### GHS

- H302 H318 H361d H373
- P260 P280 P305+P351+P338 P310 P501



### Specification

- Clear liquid
- Melting point 8.2 °C
- Boiling point 225.5 °C
- Assay (GC, on anhydrous basis) 99.5 – 100 %
- Water (KF) max. 0.03 % w/w
- GC-Headspace complies
- Colour (APHA) max. 10
- Absorption at 275 nm max. 0.50 AU
- Absorption at 300 nm max. 0.22 AU
- Absorption at 325 nm max. 0.10 AU
- Absorption at 350 – 400 nm max. 0.05 AU
- Filled under inert gas

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2355.0500



### N,N'-DIMETHYLPROPYLENE UREA FOR SYNTHESIS, PURE (MIN. 99.0 %)

- $C_6H_{12}N_2O$
- M = 128.17 g/mol
- CAS no. 7226-23-5
- EC Index no. 613-280-00-X
- EC no. 230-625-6
- Density (20 °C) 1.06 g/cm<sup>3</sup>

#### GHS

- H302 H318 H361f
- P280 P305+P351+P338 P308+P313 P501



#### Specification

- Clear, colourless to light yellow liquid
- Boiling point 247 °C
- Refractive index (20 °C) 1.4883 – 1.4913
- Water (KF) max. 1000 mg/kg

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2327.0500
1 l	Glass bottle	2327.1000

### DIMETHYL SULFOXIDE

- $C_2H_6OS$
- M = 78.13 g/mol
- CAS no. 67-68-5
- EC no. 200-664-3
- Density (20 °C) 1.1 g/ml

#### Specification

- Colourless liquid
- Melting point 18 °C
- Boiling point 189 °C

### DIMETHYL SULFOXIDE P. A., ACS (MIN. 99.9 %)

#### Specification

- Non-volatile substances max. 0.001 %
- Water max. 0.1 %
- Free acid max. 0.0002 %
- Iron (Fe) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0001 %
- Residue on evaporation max. 0.01 %
- Acidity max. 0.001 meq/g

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2347.1000

### DIMETHYL SULFOXIDE HEADSPACE GRADE (MIN. 99.98 %)

#### Specification

- Assay (GC, on anhydrous basis) 99.98 – 100 %
- Water (KF) max. 0.03 % w/w
- GC-Headspace complies
- Colour (APHA) max. 10
- Absorption at 270 nm max. 0.50 AU
- Absorption at 275 nm max. 0.22 AU
- Absorption at 300 nm max. 0.07 AU
- Absorption at 350 – 400 nm max. 0.02 AU

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2365.1000

### DIMIDIUM BROMIDE

- $C_{20}H_{18}BrN_3$
- M = 380.28 g/mol
- CAS no. 518-67-2
- EC no. 208-256-7

#### GHS

- H315 H319
- P280 P314



#### Specification

- Red-brown powder
- Melting point 246 – 248 °C
- Identity complies

Quantity	Packaging material	Art. no.
1 g	Glass bottle	2310.0001
5 g	Glass bottle	2310.0005



More information about Green Solvents → see page 355

## 1,3-DIOXOLANE FOR SYNTHESIS, PURE (MIN. 99.9 %)

- $C_3H_6O_2$
- M = 74.08 g/mol
- CAS no. 646-06-0
- EC Index no. 605-017-00-2
- EC no. 211-463-5
- Density (20 °C) 1.06 g/cm<sup>3</sup>
- UN-No. 1166
- ADR 3, II

### GHS

- H225 H319
- P210 P243 P280 P303+P361+P353  
P305+P351+P338 P403+P235 P501



### Specification

- Colourless liquid
- Melting point -26.4 °C
- Boiling point 75 °C
- Refractive index (20 °C) 1.3980 – 1.4020
- Colour (Hazen) max. 10
- Water (KF) max. 150 mg/kg
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 10 mg/kg
- Stabilized with BHT appr. 75 mg/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2314.1000
5 l	Plastic canister	2314.5000

## 1,4-DIOXANE

- $C_4H_8O_2$
- M = 88.1 g/mol
- CAS no. 123-91-1
- EC Index no. 603-024-00-5
- EC no. 204-661-8
- UN-No. 1165
- ADR 3, II

### GHS

- H225 H319 H335 H351 EUH019  
EUH066
- P201 P210 P261 P280 P308+P313  
P403+P233 P501



### Specification

- Clear, colourless liquid

## 1,4-DIOXANE FOR SYNTHESIS (MIN. 99.5 %)

- Density (20 °C) 1.031 – 1.037 g/ml

### Specification

- Melting point 11.8 °C
- Boiling point 100.3 – 101.8 °C
- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.4174 – 1.4274
- Water (KF) max. 0.1 %
- Residue on evaporation max. 50 ppm
- Acetal max. 0.2 %
- Acidity (as CH<sub>3</sub>COOH) max. 50 ppm
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 50 ppm
- Stabilized with BHT 20 – 80 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2373.1000

## 1,4-DIOXANE P. A. (MIN. 99.8 %)

- Density (20 °C) 1.032 – 1.036 g/ml

### Specification

- Boiling point 100.5 – 101.5 °C
- Identity complies
- Refractive index (20 °C) 1.4194 – 1.4254
- Water (KF) max. 500 ppm
- Freezing point 11.5 – 12.1 °C
- Residue on evaporation max. 20 ppm
- Acetal max. 50 ppm
- Acidity max. 0.0016 meq/g
- Carbonyl compounds (as HCHO) max. 100 ppm
- Total phosphorus (P) max. 0.1 ppm
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 50 ppm
- Total silicon (Si) max. 0.05 ppm
- Total sulphur (S) max. 0.2 ppm
- Calcium (Ca) max. 0.5 ppm
- Copper (Cu) max. 0.02 ppm
- Iron (Fe) max. 0.2 ppm
- Potassium (K) max. 0.1 ppm
- Magnesium (Mg) max. 0.05 ppm
- Sodium (Na) max. 0.5 ppm
- Lead (Pb) max. 0.05 ppm
- Zinc (Zn) max. 0.2 ppm
- Stabilized with BHT approx. 50 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2353.1000
2.5 l	Glass bottle	2353.2500



**1,5-DIPHENYLCARBAZID SOLUTION 1 % (MIN. 1.0 %)**

- Density 0.7945 g/cm<sup>3</sup>
- UN-No. 1993
- ADR 3, II

**GHS**

- H225 H319
- P210 P233 P280 P337+P313 P501

**Specification**

- Colourless solution
- Boiling point 78 °C
- Assay min. 1.0 %

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	DG10190.2500

**EDTA DISODIUM SALT**

- C<sub>10</sub>H<sub>14</sub>N<sub>2</sub>Na<sub>2</sub>O<sub>8</sub> x 2 H<sub>2</sub>O
- M = 372.24 g/mol
- CAS no. 6381-92-6
- EC no. 205-358-3

**GHS**

- H332 H373
- P260 P314

**Specification**

- Colourless powder
- Melting point 252°C

**EDTA DISODIUM SALT DIHYDRATE PURISS., DAB, PH. EUR., BP, PH. NORD., FCC (99.0 – 101.0 %)****Specification**

- Arsenic (As) max. 0.0001 %
- Iron (Fe) max. 0.001 %
- Lead (Pb) max. 0.001 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.01 %
- Cyanide (CN) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.05 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2216.1000

**EDTA DISODIUM SALT DIHYDRATE P. A., ACS, ISO (99.0 – 101.0 %)****Specification**

- Heavy metals (as Pb) max. 0.0005 %
- Copper (Cu) max. 0.0001 %
- Iron (Fe) max. 0.0005 %
- Lead (Pb) max. 0.001 %
- Insoluble matter max. 0.003 %
- Chloride (Cl) max. 0.004 %
- Cyanide (CN) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %
- pH (5 %, 25 °C) 4 – 5
- Nitritotriacetic acid (C<sub>6</sub>H<sub>9</sub>NO<sub>7</sub>) max. 0.05 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2281.1000

**EDTA DISODIUM SALT SOLUTION****Specification**

- Colourless liquid

**EDTA DISODIUM SALT SOLUTION 0.1 MOL/L (0.2 N)**

- 37.224 g C<sub>10</sub>H<sub>14</sub>N<sub>2</sub>Na<sub>2</sub>O<sub>8</sub> x 2 H<sub>2</sub>O/l H<sub>2</sub>O = 0.2 N

**Specification**

- Assay (colourimetric) 0.1996 – 0.2004 N

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2204.1000
5 l	Polytainer	2204.5000



More information about Green Solvents → see page 355

## EDTA DISODIUM SALT SOLUTION 0.1 MOL/L ACC. PH. EUR. CHAPTER 4.2.2

- traceable to NIST

### Specification

- Accuracy (20 °C) ±0.2 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2220.1011

## ETHANOL

- C<sub>2</sub>H<sub>5</sub>OH
- M = 46.07 g/mol
- CAS no. 64-17-5
- EC Index no. 603-002-00-5
- EC no. 200-578-6

- UN-No. 1170
- ADR 3, II

### GHS

- H225 H319
- P210 P233 P241 P243 P280 P337+P313 P403+P235



### Specification

- Clear, colourless liquid
- Melting point -117 °C
- Boiling point 78.0 – 79.0 °C

## ETHANOL 70 % V/V (MIN. 69.0 %)

### Specification

- Assay 69.0 – 71.0 % v/v
- Identity (IR) complies

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2207.1000
5 l	Plastic canister	2207.5000

## ETHANOL PURISS., PH. EUR., USP (95.1 – 96.9 % V/V)

- Density (20 °C) 0.805 – 0.812 g/ml

### Specification

- Identity complies
- Appearance of solution complies
- Acidity or alkalinity complies
- Residue on evaporation max. 0.0025 % m/V
- Origin (BSE/TSE) vegetable
- Absorption complies
- Volatile impurities complies
- Other impurities complies
- Colour of the solution complies
- Methanol (CH<sub>3</sub>OH) max. 200 ppm
- Acetals and acetaldehydes max. 10 ppm
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 2 ppm
- UV-Absorption at 240 nm (5 cm, ref. water) complies
- UV-Absorption at 250 – 260 nm complies
- UV-Absorption at 270 – 340 nm complies
- Residual solvents complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2286.1000
2.5 l	Glass bottle	2286.2500
5 l	Plastic canister	2286.5000
25 l	Plastic canister	2286.9025

## ETHANOL ABSOLUTE PURISS., BP, PH. EUR., USP (MIN. 99.5 %)

- Density (20 °C) 0.790 – 0.793 g/ml

### Specification

- Identity (IR) complies
- Appearance of solution complies
- Acidity or alkalinity max. 30 ppm
- UV absorbance (5 cm, ref. water) complies
- Residue on evaporation max. 25 ppm
- Origin (BSE/TSE) vegetable
- Residual solvents (CPMP/ICH/283/95) complies
- Water (KF) max. 0.1 %
- Volatile impurities complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2273.1000
2.5 l	Glass bottle	2273.2500
5 l	Plastic canister	2273.5000
25 l	Plastic canister	2273.9025

**ETHANOL ABSOLUTE P. A., ACS, PH. EUR., USP (MIN. 99.9 %)**

- Density (20 °C) 0.790 – 0.793 g/ml

**Specification**

- Identity (IR) complies
- UV absorbance (5 cm, ref. water) complies
- Volatile impurities complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.3602 – 1.3622
- Residue on evaporation max. 10 ppm
- Substances darkened by H<sub>2</sub>SO<sub>4</sub> complies
- Water (KF) max. 0.1 %
- Acidity (as CH<sub>3</sub>COOH) max. 10 ppm
- Alkalinity (as NH<sub>3</sub>) max. 1 ppm
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) max. 30 ppm
- Methanol (CH<sub>3</sub>OH) max. 50 ppm
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 2 ppm
- Carbonyl compounds (as CO) max. 5 ppm
- Substances reducing KMnO<sub>4</sub> max. 3 ppm
- Heavy metals (as Pb) max. 1 ppm
- Aluminium (Al) max. 0.5 ppm
- Boron (B) max. 0.02 ppm
- Barium (Ba) max. 0.1 ppm
- Calcium (Ca) max. 0.5 ppm
- Cadmium (Cd) max. 0.05 ppm
- Cobalt (Co) max. 0.02 ppm
- Chromium (Cr) max. 0.02 ppm
- Copper (Cu) max. 0.02 ppm
- Iron (Fe) max. 0.1 ppm
- Magnesium (Mg) max. 0.1 ppm
- Manganese (Mn) max. 0.02 ppm
- Nickel (Ni) max. 0.02 ppm
- Lead (Pb) max. 0.1 ppm
- Tin (Sn) max. 0.1 ppm
- Zinc (Zn) max. 0.1 ppm
- Water miscibility complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2246.1000
2.5 l	Glass bottle	2246.2500
5 l	Plastic canister	2246.5000
25 l	Plastic canister	2246.9025

**ETHANOL ABSOLUTE FOR HPLC (MIN. 99.9 %)**

- Density (20 °C) 0.79 g/ml

**Specification**

- Refractive index (20 °C) 1.358 – 1.362
- Water (KF) max. 500 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 10 mg/kg
- Assay (20 °C) min. 99.9 % v/v
- UV transmittance at 210 nm min. 30.0 %
- UV transmittance at 240 nm min. 80.0 %
- UV transmittance at 250 nm min. 90.0 %
- UV transmittance at 260 nm min. 98.0 %
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2222.1000
2.5 l	Glass bottle	2222.2500

**ETHANOL VLSI (MIN. 99.9 %)**

- Density (20 °C) 0.79 g/ml

**Specification**

- Assay (GC, anhydrous basis) 99.9 – 100.0 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.0003 % w/w
- Water (KF) max. 0.05 % w/w
- Acidity (as CH<sub>3</sub>COOH) max. 0.002 %
- Alkalinity (as NH<sub>3</sub>) max. 0.0005 %
- Chloride (Cl) max. 0.2 ppm
- Phosphate (PO<sub>4</sub>) max. 0.3 ppm
- Sulphate (SO<sub>4</sub>) max. 0.5 ppm
- Silver (Ag) max. 10 ppb
- Aluminium (Al) max. 20 ppb
- Arsenic (As) max. 10 ppb
- Gold (Au) max. 10 ppb
- Boron (B) max. 10 ppb
- Barium (Ba) max. 10 ppb
- Beryllium (Be) max. 10 ppb
- Calcium (Ca) max. 50 ppb
- Cadmium (Cd) max. 10 ppb
- Cobalt (Co) max. 10 ppb
- Chromium (Cr) max. 10 ppb
- Copper (Cu) max. 10 ppb
- Iron (Fe) max. 30 ppb
- Gallium (Ga) max. 20 ppb
- Germanium (Ge) max. 20 ppb
- Potassium (K) max. 50 ppb
- Lithium (Li) max. 20 ppb
- Magnesium (Mg) max. 20 ppb
- Manganese (Mn) max. 10 ppb
- Molybdenum (Mo) max. 20 ppb
- Sodium (Na) max. 50 ppb
- Nickel (Ni) max. 10 ppb
- Lead (Pb) max. 20 ppb
- Antimony (Sb) max. 10 ppb
- Silicon (Si) max. 20 ppb
- Tin (Sn) max. 20 ppb
- Strontium (Sr) max. 20 ppb
- Vanadium (V) max. 20 ppb
- Zinc (Zn) max. 30 ppb
- Zirconium (Zr) max. 30 ppb
- Particle count >0.5 µm max. 100 P/ml
- Particle count >1.0 µm max. 10 P/ml
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	2262.2500
5 l	Plastic bottle	2262.5000

## ETHANOL DENATURATED WITH MEK, IPA AND BITREX®

- C<sub>2</sub>H<sub>5</sub>OH
- M = 46.07 g/mol
- CAS no. 64-17-5
- EC Index no. 603-002-00-5
- EC no. 200-578-6
- UN-No. 1170
- ADR 3, II

### GHS

- H225 H319
- P210 P240 P241 P260 P280  
P303+P361+P353 P501



### Specification

- Melting point -114.5 °C
- Boiling point >78 °C

## BIOETHANOL 96 % DENATURATED WITH MEK, IPA AND BITREX® (MIN. 96.0 %)

- Density (20 °C) 0.805 – 0.807 g/ml

### Specification

- Refractive index (20 °C) 1.362 – 1.364
- Methanol (CH<sub>3</sub>OH) max. 50 mg/dl
- 1-Propanol (C<sub>3</sub>H<sub>7</sub>OH) max. 10.0 mg/dl
- Methyl ethyl ketone 0.98 – 1.20 l/hl
- Bitrex® 0.98 – 1.20 g/hl
- Fusel oils max. 12.0 mg/dl
- Total acids (as CH<sub>3</sub>COOH) max. 1.0 mg/dl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2209.1000
5 l	Plastic canister	2209.5000
10 l	Plastic canister	2209.9010
25 l	Plastic canister	2209.9025
200 l	Metal drum	2209.9200

## BIOETHANOL 99 % DENATURATED WITH MEK, IPA AND BITREX® (MIN. 99.8 %)

- Density (20 °C) 0.789 – 0.790 g/ml

### Specification

- Refractive index (20 °C) 1.361 – 1.363
- Methanol (CH<sub>3</sub>OH) max. 50 mg/dl
- Methyl ethyl ketone 0.98 – 1.20 l/hl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl
- Bitrex® 0.98 – 1.20 g/hl
- Fusel oils max. 12.0 mg/dl
- Total acids (as CH<sub>3</sub>COOH) max. 1.0 mg/dl
- 1-Propanol (C<sub>3</sub>H<sub>7</sub>OH) max. 10 mg/dl
- Water max. 3400 ppm

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2211.1000
5 l	Plastic canister	2211.5000
10 l	Plastic canister	2211.9010
25 l	Plastic canister	2211.9025

## BIOETHANOL 99 % DENATURATED WITH MEK, IPA AND BITREX® (MIN. 99.8 %)

- Density (20 °C) 0.789 – 0.790 g/ml

### Specification

- Methyl ethyl ketone 0.98 – 1.20 l/hl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl
- Bitrex® 0.98 – 1.20 g/100 l
- Fusel oils max. 12.0 mg/dl
- Total acids (as CH<sub>3</sub>COOH) max. 1.0 mg/dl
- Methanol (CH<sub>3</sub>OH) max. 50.0 mg/dl
- Water max. 3400 ppm
- 1-Propanol (C<sub>3</sub>H<sub>7</sub>OH) max. 10.0 mg/dl
- Refractive index 1.361 – 1.363

Quantity	Packaging material	Art. no.
200 l	Metal drum	2235.9200

**ETHANOL 70 % DENATURED WITH MEK, IPA AND BITREX® (MIN. 69.0 %)**

- Density (20 °C) 0.8831 – 0.8880 g/ml

**Specification**

- Assay (20 °C) 69.0 – 71.0 %
- Methyl ethyl ketone 0.98 – 1.20 l/hl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl
- Bitrex® max. 10 ppm

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2202.1000
5 l	Plastic canister	2202.5000
10 l	Plastic canister	2202.9010
25 l	Plastic canister	2202.9025
200 l	Metal drum	2202.9200

**ETHANOL 80 % DENATURED WITH MEK, IPA AND BITREX® (MIN. 79.0 %)**

- Density (20 °C) 0.8565 – 0.8620 g/ml

**Specification**

- Assay (20 °C) 79.0 – 81.0 %
- Methyl ethyl ketone 0.98 – 1.20 l/hl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl
- Bitrex® max. 10 ppm

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2203.1000
5 l	Plastic canister	2203.5000

**ETHANOL 96 % DENATURED WITH MEK, IPA AND BITREX® (MIN. 96.0 %)**

- Density (20 °C) 0.805 – 0.807 g/ml

**Specification**

- Refractive index (20 °C) 1.362 – 1.364
- Methyl ethyl ketone 1.0 – 1.20 l/hl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl
- Bitrex® max. 10 ppm

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2206.5000
10 l	Plastic canister	2206.9010
25 l	Plastic canister	2206.9025
25 l	Tinplate drum	2206.6025

**ETHANOL 99 % DENATURED WITH MEK, IPA AND BITREX® (MIN. 99.7 %)**

- Density 0.789 – 0.793 g/ml

**Specification**

- Refractive index (25 °C) 1.357 – 1.363
- Methyl ethyl ketone 0.98 – 1.20 l/hl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl
- Bitrex® max. 10 ppm

Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2236.0500
1 l	Plastic bottle	2236.1000
2.5 l	Plastic canister	2236.2500
10 l	Tinplate drum	2236.6010

## ETHANOL 99 % DENATURATED WITH MEK, IPA AND BITREX® (MIN. 99.8 %)

- Density (20 °C) 0.789 – 0.790 g/ml

### Specification

- Refractive index 1.361 – 1.363
- Methyl ethyl ketone 0.98 – 1.20 l/hl
- Isopropanol (C<sub>3</sub>H<sub>7</sub>OH) 0.98 – 1.20 l/hl
- Bitrex® max. 10 ppm
- Methanol (CH<sub>3</sub>OH) max. 50 mg/dl
- Fusel oils max. 12.0 mg/dl
- Total acids (as CH<sub>3</sub>COOH) max. 1.0 mg/dl
- 1-Propanol (C<sub>3</sub>H<sub>7</sub>OH) max. 10.0 mg/dl
- Water max. 3400 ppm

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2212.5000
10 l	Plastic canister	2212.9010
25 l	Plastic canister	2212.9025
25 l	Tinplate drum	2212.6025
200 l	Metal drum	2212.9200

## ETHANOL 96 % DENATURATED WITH PETROLEUM ETHER (MIN. 96.0 %)

- C<sub>2</sub>H<sub>5</sub>OH
- Density (20 °C) 0.807 g/ml
- UN-No. 1170
- ADR 3, II

### GHS

- H225 H319
- P210 P233 P240 P241 P243 P280  
P303+P361+P353 P403+P235 P501



### Specification

- Clear, colourless liquid
- Refractive index (20 °C) 1.3620 – 1.3645
- Petroleum ether 0.98 – 1.40 l/hl
- Fusel oils max. 12.0 mg/dl
- Total acids (as CH<sub>3</sub>COOH) max. 1.0 mg/dl
- 1-Propanol (C<sub>3</sub>H<sub>7</sub>OH) max. 10.0 mg/dl

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2248.5000

## ETHANOLAMINE

- C<sub>2</sub>H<sub>7</sub>NO
- M = 61.08 g/mol
- CAS no. 141-43-5
- EC Index no. 603-030-00-8
- EC no. 205-483-3
- Density (20 °C) 1.02 g/ml
- UN-No. 2491
- ADR 8, III

### GHS

- H302+H312+H332 H314
- P264 P271 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P501



### Specification

- Clear, colourless liquid
- Melting point 9.8 – 10.8 °C
- Boiling point 169.5 – 170.5 °C

## ETHANOLAMINE FOR SYNTHESIS (MIN. 99.0 %)

### Specification

- Water max. 0.25 %
- Sulphated ash max. 0.1 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2163.1000
2.5 l	Glass bottle	2163.2500

## ETHANOLAMINE P. A. (MIN. 99.0 %)

### Specification

- Assay (alkalimetric) min. 99.0 %
- Identity complies
- Water miscibility complies
- Alcohol miscibility complies
- Refractive index (20 °C) 1.4491 – 1.4591
- Chloride (Cl) max. 10 ppm
- Sulphate (SO<sub>4</sub>) max. 20 ppm
- Iron (Fe) max. 1 ppm
- Diethanolamine (C<sub>4</sub>H<sub>11</sub>NO<sub>2</sub>) max. 0.5 %
- Triethanolamine (C<sub>6</sub>H<sub>15</sub>NO<sub>3</sub>) max. 0.5 %
- Heavy metals (as Pb) max. 2 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2170.1000

## ETHYL ACETATE

- $\text{CH}_3\text{COOC}_2\text{H}_5$
- M = 88.11 g/mol
- CAS no. 141-78-6
- EC Index no. 607-022-00-5
- EC no. 205-500-4
- Density (20 °C) 0.898 – 0.902 g/ml
- UN-No. 1173
- ADR 3, II

### GHS

- H225 H319 H336 EUH066
- P210 P241 P280 P303+P361+P353 P305+P351+P338 P405 P501



### Specification

- Colourless liquid
- Melting point -83 °C
- Boiling point 77 – 78 °C

## ETHYL ACETATE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)

### Specification

- Non-volatile substances max. 0.001 %
- Water max. 0.05 %
- Free acid max. 0.005 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Ethanol ( $\text{C}_2\text{H}_5\text{OH}$ ) max. 0.1 %
- Methanol ( $\text{CH}_3\text{OH}$ ) max. 0.1 %
- Colour (APHA) max. 10
- Methyl acetate ( $\text{C}_3\text{H}_6\text{O}_2$ ) max. 0.1 %
- Residue on evaporation max. 0.002 %
- Readily carbonisable substances complies
- Acidity max. 0.0009 meq/g
- Substances darkened by  $\text{H}_2\text{SO}_4$  complies

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2257.2500
2.5 l	Plastic bottle	2257.2511
5 l	Plastic canister	2257.5000

## ETHYL ACETATE FOR HPLC (MIN. 99.8 %)

### Specification

- Refractive index (20 °C) 1.370 – 1.374
- Water (KF) max. 200 mg/kg
- Non-volatile substances max. 10 mg/kg
- Free acids (as  $\text{CH}_3\text{COOH}$ ) max. 30 mg/kg
- UV transmittance at 260 nm min. 75.0 %
- UV transmittance at 270 nm min. 90.0 %
- UV transmittance at 300 nm min. 95.0 %
- Ethanol ( $\text{C}_2\text{H}_5\text{OH}$ ) max. 0.04 %
- Methanol ( $\text{CH}_3\text{OH}$ ) max. 0.01 %
- Colour (Hazen) max. 10
- Filtered through 0.2  $\mu\text{m}$

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2237.1000
2.5 l	Glass bottle	2237.2500

## ETHYL ACETATE FOR RESIDUE ANALYSIS (MIN. 99.8 %)

### Specification

- Refractive index (20 °C) 1.370 – 1.374
- Water (KF) max. 300 mg/kg
- Non-volatile substances max. 2 mg/kg
- Free acids (as  $\text{CH}_3\text{COOH}$ ) max. 30 mg/kg
- GC-ECD: Peak (lindane) Retention range trichlorobenzene to mirex max. 3 ng/l
- Colour (Hazen) max. 10
- GC-NPD: Peak (ethylparathion) Retention range Atrazin to Coumaphos max. 3 mg/l

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2219.1000
2.5 l	Glass bottle	2219.2500

## ETHYL ACETATE FOR LC-MS (MIN. 99.95 %)

### Specification

- Identity complies
- Colour (Hazen) max. 10
- Refractive index (20 °C) 1.370 – 1.374
- Water (KF) max. 200 mg/kg
- Residue on evaporation max. 2 mg/kg
- Free acids (as  $\text{CH}_3\text{COOH}$ ) max. 0.0030 %
- Free alkali (as  $\text{NH}_3$ ) max. 0.0005 %
- UV transmittance at 260 nm min. 75.0 %
- UV transmittance at 275 nm min. 97.0 %
- UV transmittance at 300 nm min. 98.0 %
- Aluminium (Al) max. 0.000005 %
- Iron (Fe) max. 0.000005 %
- Sodium (Na) max. 0.000005 %
- Magnesium (Mg) max. 0.000005 %
- Calcium (Ca) max. 0.000005 %
- Potassium (K) max. 0.000005 %
- Filtered through 0.2  $\mu\text{m}$

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2278.1000

## ETHYL ACETATE FOR UHPLC-MS (MIN. 99.95 %)

### Specification

- Assay (GC, on anhydrous basis) 99.95 – 100 %
- Water (KF) max. 0.02 % w/w
- Residue on evaporation max. 0.0002 % w/w
- LC-MS suitability test (reserpine) max. 50 ppb
- Absorption at 255 nm max. 0.60 AU
- Absorption at 260 nm max. 0.10 AU
- Absorption at 275 nm max. 0.01 AU
- Fluorescence (as quinine) at 254 nm max. 2.0 ppb
- Fluorescence (as quinine) at 365 nm max. 1.0 ppb
- Acidity max. 0.0004 meq/g
- Alkalinity max. 0.0004 meq/g
- Aluminium (Al) max. 20 ppb
- Calcium (Ca) max. 50 ppb
- Iron (Fe) max. 20 ppb
- Potassium (K) max. 50 ppb
- Magnesium (Mg) max. 20 ppb
- Sodium (Na) max. 100 ppb
- Lead (Pb) max. 20 ppb
- Filtered through 0.1 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2279.2500

## ETHYLENEDIAMINE P. A. (MIN. 98.0 %)

- $C_2H_8N_2$
- M = 60.1 g/mol
- CAS no. 107-15-3
- EC Index no. 612-006-00-6
- EC no. 203-468-6
- Density 0.890 – 0.906 g/ml
- UN-No. 1604
- ADR 8 (3), II

### GHS

- H226 H302+H312 H314 H317 H330 H334
- P210 P260 P280 P284 P303+P361+P353 P304+P340 P305+P351+P338 P310 P501



### Specification

- Clear, colourless liquid
- Melting point 10 – 12 °C
- Boiling point 115.8 – 117.3 °C
- Identity complies
- Alcohol miscibility complies
- Refractive index (20 °C) 1.4470 – 1.4570
- Heavy metals (as Pb) max. 5 ppm
- Residue on ignition max. 100 ppm
- Iron (Fe) max. 5 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2175.1000

## ETHYLENE GLYCOL P. A., ACS, PH. EUR., USP (MIN. 99.5 %)

- $C_2H_6O_2$
- M = 62.07 g/mol
- CAS no. 107-21-1
- EC Index no. 603-027-00-1
- EC no. 203-473-3
- Density 1.11 g/ml

### GHS

- H302 H373
- P270 P301+P312 P314 P330 P501



### Specification

- Colourless liquid
- Boiling point 200 °C
- Water max. 0.1 %
- Iron (Fe) max. 0.00005 %
- Substances reducing  $KMnO_4$  max. 0.0003 %
- Chloride (Cl) max. 0.00002 %
- Sulphated ash max. 0.005 %

Quantity	Packaging material	Art. no.
25 l	Plastic canister	2282.9025



**ETHYLENE GLYCOL MONOBUTYL ETHER FOR SYNTHESIS (MIN. 99.0 %)**

- C<sub>6</sub>H<sub>14</sub>O<sub>2</sub>
- M = 118.18 g/mol
- CAS no. 111-76-2
- EC Index no. 603-014-00-0

- EC no. 203-905-0
- Density (20 °C) 0.897 – 0.905 g/ml

**GHS**

- H302+H312+H332 H315 H319
- P261 P264 P280 P312 P501

**Specification**

- Clear, colourless liquid
- Boiling point 167 – 172 °C
- Identity complies
- Refractive index (20 °C) 1.4167 – 1.4207
- Residue on evaporation max. 50 ppm
- Water (KF) max. 0.1 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2269.1000

**FORMALDEHYDE SOLUTION**

- HCHO

**FORMALDEHYDE SOLUTION 4 % PHOSPHATE BUFFERED (3.5 – 4.5 % (STAB.))**

- Density (20 °C) 1.015 – 1.025 g/ml

**GHS**

- H317 H341 H350
- P261 P280 P308+P313 P405 P501

**Specification**

- Clear, colourless liquid
- Identity complies
- Refractive index (20 °C) 1.330 – 1.350
- pH (20 °C) 7.0 – 7.4
- Stabilized with methanol

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2134.5000

**FORMALDEHYDE SOLUTION 4.5 % PHOSPHATE BUFFERED (4.0 – 5.0 % (STAB.))**

- Density (20 °C) 1.016 – 1.019 g/ml

**GHS**

- H317 H341 H350
- P261 P280 P308+P313 P405 P501

**Specification**

- Clear, colourless liquid
- Refractive index (20 °C) 1.330 – 1.350
- pH (20 °C) 7.0 – 7.4
- Stabilized with methanol

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2135.1000
5 l	Plastic canister	2135.5000
10 l	Plastic canister	2135.9010

## FORMALDEHYDE SOLUTION P. A., ACS, ISO (MIN. 37.0 % W/W (STAB.))

- M = 30.03 g/mol
- Density (20 °C) 1.075 – 1.090 g/ml
- UN-No. 2209
- ADR 8, III

### GHS

- H301+H311+H331 H314 H317 H341 H350 H370
- P201 P260 P280 P301+P310 P303+P361+P353 P305+P351+P338 P308+P311 P403+P233 P501



### Specification

- Colourless liquid
- Melting point -118 °C
- Boiling point 97 °C
- Sulphated ash max. 0.005 %
- Free acid max. 0.03 %
- Iron (Fe) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0002 %
- Chloride (Cl) max. 0.0001 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- Colour (APHA) max. 10
- Lead (Pb) max. 0.0002 %
- Residue on evaporation max. 0.005 %

- Acidity max. 0.006 meq/g
- Stabilized with methanol 9 – 11 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2137.1011
2.5 l	Plastic bottle	2137.2511
25 l	Plastic canister	2137.9025

## FORMAMIDE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)

- CH<sub>3</sub>NO
- M = 45.04 g/mol
- CAS no. 75-12-7
- EC Index no. 616-052-00-8
- EC no. 200-842-0
- Density 1.13 g/ml

### GHS

- H360D
- P201 P280 P308+P313 P501



### Specification

- Colourless liquid
- Melting point 2.0 °C
- Boiling point 210.0 °C
- pH (200 g/l H<sub>2</sub>O) 4.0 – 5.0
- Chloride (Cl) max. 0.0001 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0001 %
- Iron (Fe) max. 0.0001 %
- Lead (Pb) max. 0.0001 %
- Zinc (Zn) max. 0.0001 %
- Water max. 0.1 %
- Formic acid (HCOOH) max. 0.02 %
- Ammonium acetate (CH<sub>3</sub>COONH<sub>4</sub>) max. 0.1 %
- Non-volatile substances max. 0.005 %
- Colour (APHA) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2140.1000
5 l	Aluminum can	2140.5000



## FORMIC ACID

- HCOOH
- M = 46.03 g/mol
- CAS no. 64-18-6
- EC Index no. 607-001-00-0
- EC no. 200-579-1
- Density 1.220 – 1.221 g/ml
- UN-No. 1779
- ADR 8 (3), II

### GHS

- H226 H302 H314 H331 EUH071
- P210 P260 P280 P301+P312  
P301+P330+P331 P303+P361+P353  
P304+P340 P305+P351+P338  
P403+P233 P501



### Specification

- Colourless liquid
- Melting point -4 – -8.4 °C
- Boiling point 101 °C

## FORMIC ACID 98 – 100 % PURISS. (MIN. 99.0 %)

### Specification

- Assay (titr.) min. 99.0 %
- Acetic acid (CH<sub>3</sub>COOH) max. 0.005 %
- Chloride (Cl) max. 0.0001 %
- Sulphate (SO<sub>4</sub>) max. 0.0001 %
- Iron (Fe) max. 0.0001 %
- Other heavy metals max. 0.0001 %
- Residue on evaporation max. 0.002 %

Quantity	Packaging material	Art. no.
8 l	Plastic canister	DG1250.9008
10 l	Plastic canister	DG1250.9010
9.5 l	Plastic canister	DG1250.9095

## FORMIC ACID 99 – 100 % P. A., ACS, PH. EUR. (MIN. 99.0 %)

### Specification

- Non-volatile substances max. 0.001 %
- Ammonium (NH<sub>4</sub>) max. 0.001 %
- Silver (Ag) max. 0.000002 %
- Aluminium (Al) max. 0.000005 %
- Barium (Ba) max. 0.000002 %
- Beryllium (Be) max. 0.000002 %
- Bismuth (Bi) max. 0.00001 %
- Calcium (Ca) max. 0.00002 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.0002 %
- Germanium (Ge) max. 0.000005 %
- Potassium (K) max. 0.00001 %
- Lithium (Li) max. 0.000002 %
- Magnesium (Mg) max. 0.00005 %
- Manganese (Mn) max. 0.000005 %
- Molybdenum (Mo) max. 0.000002 %
- Sodium (Na) max. 0.00005 %
- Nickel (Ni) max. 0.000005 %
- Lead (Pb) max. 0.000002 %
- Strontium (Sr) max. 0.000002 %
- Titanium (Ti) max. 0.00001 %
- Thallium (Tl) max. 0.000005 %
- Vanadium (V) max. 0.000005 %
- Zinc (Zn) max. 0.000005 %
- Zirconium (Zr) max. 0.00001 %
- Chloride (Cl) max. 0.0005 %
- Oxalate (C<sub>2</sub>O<sub>4</sub>) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.0005 %
- Sulphite (SO<sub>3</sub>) max. 0.001 %
- Acetic acid (CH<sub>3</sub>COOH) max. 0.005 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.003 %
- Heavy metals (as Pb) max. 0.001 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2694.1011

## D-(+)-GLUCOSE ANHYDROUS PURISS., DAB, PH. EUR., BP, PH. FRANÇ. (MIN. 99 %)

- C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>
- M = 180.16 g/mol
- CAS no. 50-99-7
- EC no. 200-075-1
- Density 1.65 g/cm<sup>3</sup>

### Specification

- White solid
- Water max. 1 %
- Residue on ignition max. 0.1 %
- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.02 %
- Lead (Pb) max. 0.00005 %
- Chloride (Cl) max. 0.01 %
- Sulphate (SO<sub>4</sub>) max. 0.02 %
- Sulphite (SO<sub>3</sub>) max. 0.001 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	9375.0250

## GLYCEROL

- $C_3H_8O_3$
- M = 92.09 g/mol
- CAS no. 56-81-5
- EC no. 200-289-5
- Density 1.26 g/ml

### Specification

- Colourless liquid
- Melting point 18 °C
- Boiling point 290 °C

## GLYCEROL ANHYDROUS PURISS., DAB, PH. EUR., BP, PH. FRANÇ., USP, FCC, E422 (MIN. 99.0 %)

### Specification

- Water  $\pm$ 2.0 %
- Residue on ignition max. 0.01 %
- Free acid max. 0.003 %
- Arsenic (As) max. 0.0001 %
- Copper (Cu) max. 0.001 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Sulphate ( $SO_4$ ) max. 0.001 %
- Reducing substances max. 0.0005 %
- 1,2,4-Butanetriol ( $C_4H_7(OH)_3$ ) max. 0.2 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2039.1000

## GLYCEROL ANHYDROUS P. A., ACS (MIN. 99.0 %)

### Specification

- Water max. 1 %
- Colour (Hazen) max. 10
- Acidity max. 0.05 meq/g
- Alkalinity max. 0.03 meq/g
- Sulphated ash max. 0.005 %
- Ammonium ( $NH_4$ ) max. 0.0005 %
- Arsenic (As) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0001 %
- Iron (Fe) max. 0.0001 %
- Chloride (Cl) max. 0.0001 %
- Sulphate ( $SO_4$ ) max. 0.0005 %
- Readily carbonisable substances complies
- Fatty acid esters max. 0.05 %
- Glyceraldehyde ( $C_3H_6O_3$ ) max. 0.003 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2050.1011

## GLYCINE P. A. (MIN. 99.5 %)

- $C_2H_5NO_2$
- M = 75.07 g/mol
- CAS no. 56-40-6
- EC no. 200-272-2
- Density 1.16 g/cm<sup>3</sup>

### Specification

- White crystalline powder
- Melting point 232 °C (decomposition)
- Loss on drying (110 °C) max. 0.2 %
- Foreign amino acids max. 0.1 %
- Ammonium ( $NH_4$ ) max. 0.02 %
- Chloride (Cl) max. 0.005 %
- Sulphate ( $SO_4$ ) max. 0.005 %
- Lead (Pb) max. 0.0005 %
- Arsenic (As) max. 0.0001 %
- Iron (Fe) max. 0.0005 %
- pH (5 %, 20 °C) 5.9 – 6.4

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	9366.1000

## HEPTANE TECHNICAL GRADE (MIN. 28.0 % W/W)

- $C_7H_{16}$
- EC Index no. 601-008-00-2
- EC no. 205-563-8
- Density (15 °C) 0.700 – 0.725 g/ml
- UN-No. 1206
- ADR 3, II

### GHS

- H225 H304 H315 H336 H410
- P210 P241 P243 P261 P271 P273
- P280 P301+P310 P303+P361+P353
- P304+P340 P312 P331 P403+P233 P501



### Specification

- Clear, colourless liquid
- Boiling point 94 – 100 °C
- Mixture of isomers
- Refractive index (20 °C) 1.390 – 1.410
- n-Heptane ( $C_7H_{16}$ ) min. 28.0 % w/w
- Colour (Saybolt) min. 30
- Aromatics max. 100 ppm
- Benzene ( $C_6H_6$ ) max. 15 ppm

Quantity	Packaging material	Art. no.
200 l	Metal drum	1966.9200

**N-HEPTANE**

- C<sub>7</sub>H<sub>16</sub>
- M = 100.21 g/mol
- CAS no. 142-82-5
- EC Index no. 601-008-00-2
- EC no. 205-563-8
- Density (20 °C) 0.68 – 0.687 g/ml
- UN-No. 1206
- ADR 3, II

**GHS**

- H225 H304 H315 H336 H410
- P210 P241 P243 P261 P271 P273
- P280 P301+P310 P303+P361+P353
- P304+P340 P312 P331 P403+P233 P501

**Specification**

- Clear, colourless liquid
- Melting point -90.5 °C
- Boiling point 97.9 – 98.9 °C

**N-HEPTANE PURISS. (MIN. 99.0 %)****Specification**

- Non-volatile substances max. 0.005 %
- Free acid max. 0.005 %
- Water max. 0.02 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1935.1000

**N-HEPTANE P. A. (MIN. 99.0 %)****Specification**

- Identity (IR) complies
- Refractive index (20 °C) 1.386 – 1.390
- Density (d 20/4) 0.681 – 0.687
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 10 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 10 mg/kg
- Aromatic compounds max. 50 mg/kg
- Total sulphur (S) max. 10 ppm
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1948.1000
2.5 l	Glass bottle	1948.2500
25 l	Metal drum	1948.9025

**N-HEPTANE FOR HPLC (MIN. 99.2 %)****Specification**

- Identity complies
- Refractive index (20 °C) 1.3836 – 1.3916
- Water (KF) max. 100 ppm
- Residue on evaporation max. 5 ppm
- Acidity or alkalinity max. 0.00015 meq/g
- UV transmittance at 200 nm min. 20.0 %
- UV transmittance at 210 nm min. 55.0 %
- UV transmittance at 220 nm min. 80.0 %
- UV transmittance at 230 nm min. 92.0 %
- UV transmittance at 240 nm min. 96.0 %
- UV transmittance at 250 nm min. 98.0 %
- UV transmittance at 260 nm min. 99.0 %
- Aromatic compounds max. 5 ppm
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	1968.2500

**HEPTANE-1-SULFONIC ACID SODIUM SALT (MIN. 99.0 %)**

- CH<sub>3</sub>(CH<sub>2</sub>)<sub>6</sub>SO<sub>3</sub>Na
- M = 202.25 g/mol
- CAS no. 22767-50-6
- EC no. 245-210-5

**Specification**

- White, crystalline powder
- Identity complies
- Loss on drying max. 2.0 %
- pH (10 % solution) 5.5 – 7.5
- Absorption at 200 nm (0.25 M) max. 0.1 AU
- Absorption at 210 nm (0.25 M) max. 0.05 AU
- Absorption at 220 nm (0.25 M) max. 0.04 AU
- Absorption at 230 nm (0.25 M) max. 0.03 AU
- Absorption at 240 nm (0.25 M) max. 0.01 AU
- Absorption at 250 nm (0.25 M) max. 0.01 AU
- Absorption at 260 nm (0.25 M) max. 0.01 AU

Quantity	Packaging material	Art. no.
25 g	Glass bottle	1906.0025

## HEXAFLUORO-2-PROPANOL P. A. (MIN. 99.0 %)

- $\text{CF}_3\text{CH}(\text{OH})\text{CF}_3$
- M = 168.04 g/mol
- CAS no. 920-66-1
- EC no. 213-059-4
- Density (20 °C) ~1.6 g/cm<sup>3</sup>
- UN-No. 3265
- ADR 8, II

### GHS

- H302+H312+H332 H314
- P260 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P501



### Specification

- Colourless liquid
- Melting point -3.4 °C
- Boiling point 58.2 °C
- Identity (IR) complies
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
100 ml	Glass bottle	1909.0100
500 ml	Glass bottle	1909.0500

## HEXAMETHYLDISILAZANE P. A. (HMDS) (MIN. 97.5 %)

- $\text{C}_6\text{H}_{19}\text{NSi}_2$
- M = 161.39 g/mol
- CAS no. 999-97-3
- EC no. 213-668-5
- Density (20 °C) 0.774 g/cm<sup>3</sup>
- UN-No. 3286
- ADR 3 (6.1, 8), II

### GHS

- H225 H302 H311 H315 H319 H335
- P210 P241 P280 P303+P361+P353 P304+P340 P305+P351+P338 P403+P235 P501



### Specification

- Clear liquid
- Melting point -82 °C
- Boiling point 126 °C
- Identity complies
- Colour (Hazen) max. 10
- Refractive index (20 °C) 1.4060 – 1.4090

Quantity	Packaging material	Art. no.
25 ml	Glass bottle	1918.0025

## N-HEXANE

- $\text{C}_6\text{H}_{14}$
- M = 86.18 g/mol
- CAS no. 110-54-3
- EC Index no. 601-037-00-0
- EC no. 203-777-6
- Density 0.655 – 0.665 g/ml
- UN-No. 1208
- ADR 3, II

### GHS

- H225 H304 H315 H336 H361f H373 H411
- P201 P202 P210 P241 P242 P243 P260 P264 P271 P273 P281 P301+P310 P303+P361+P353 P304+P340 P308+P313 P331 P403+P233 P501



### Specification

- Colourless liquid
- Melting point -94 °C
- Boiling point 67.0 – 69.0 °C

## N-HEXANE P. A., ACS, PH. EUR. (MIN. 95.0 %)

### Specification

- Identity complies
- Refractive index (20 °C) 1.375 – 1.376
- Residue on evaporation max. 10 ppm
- Aromatic compounds max. 10 ppm
- Water-soluble, titratable acid max. 0.0003 meq/g
- Substances reducing  $\text{KMnO}_4$  max. 20 ppm
- Thiophene ( $\text{C}_4\text{H}_4\text{S}$ ) complies
- Total sulphur (S) max. 5 ppm
- Assay (hexan isomer and methylcyclopentane) min. 98.5 %
- Aluminium (Al) max. 0.5 ppm
- Copper (Cu) max. 0.01 ppm
- Iron (Fe) max. 0.1 ppm
- Nickel (Ni) max. 0.01 ppm
- Lead (Pb) max. 0.01 ppm
- Zinc (Zn) max. 0.01 ppm
- Water (KF) max. 100 ppm
- Colour (APHA) max. 10
- Readily carbonisable substances complies
- Alcohol miscibility complies
- Diethyl ether miscibility complies
- Chloroform miscibility complies

Quantity	Packaging material	Art. no.
5 l	Plastic canister	1975.5011

**N-HEXANE P. A., ACS, PH. EUR. (MIN. 99.0 %)****Specification**

- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Free acid max. 0.002 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Aromatic compounds max. 0.01 %
- Total sulphur (S) max. 0.005 %
- Thiophene (C<sub>4</sub>H<sub>4</sub>S) max. 0.0005 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.001 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1929.1000
2.5 l	Glass bottle	1929.2500
25 l	Metal drum	1929.9025

**N-HEXANE FOR HPLC (MIN. 96.0 %)****Specification**

- Refractive index (20 °C) 1.373 – 1.377
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 5 mg/kg
- Aromatic compounds max. 10 mg/kg
- UV transmittance at 220 nm min. 82.0 %
- UV transmittance at 230 nm min. 92.0 %
- UV transmittance at 245 nm min. 98.0 %
- Total sulphur (S) max. 5 mg/kg
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1964.1000
2.5 l	Glass bottle	1964.2500

**N-HEXANE FOR RESIDUE ANALYSIS (MIN. 95.0 %)****Specification**

- Identity complies
- Refractive index (20 °C) 1.373 – 1.377
- Water (KF) max. 150 mg/kg
- Non-volatile substances max. 5 mg/kg
- GC-ECD: Peak (lindane) Retention range trichlorobenzene to mirex max. 3 ng/l
- GC-NPD: Peak (ethylparathion) Retention range atrazin to coumaphos max. 3 ng/l
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1973.1000
2.5 l	Glass bottle	1973.2500

**HEXANE-1-SULFONIC ACID SODIUM SALT (MIN. 99.0 %)**

- CH<sub>5</sub>(CH<sub>2</sub>)<sub>5</sub>SO<sub>3</sub>Na
- M = 188.22 g/mol
- CAS no. 2832-45-3
- EC no. 220-601-3

**GHS**

- H315 H317 H319 H334
- P264 P280 P284 P304+P340 P305+P351+P338 P342+P311 P501

**Specification**

- White, crystalline powder
- Water (KF) max. 2.0 %
- Absorption at 200 nm (0.25 M) max. 0.1 AU
- Absorption at 210 nm (0.25 M) max. 0.05 AU
- Absorption at 220 nm (0.25 M) max. 0.04 AU
- Absorption at 230 nm (0.25 M) max. 0.03 AU
- Absorption at 240 nm (0.25 M) max. 0.01 AU
- Absorption at 250 nm (0.25 M) max. 0.01 AU
- Absorption at 260 nm (0.25 M) max. 0.01 AU

Quantity	Packaging material	Art. no.
25 g	Glass bottle	1905.0025

## HYDROCHLORIC ACID

- M = 36.46 g/mol

### Specification

- Clear, colourless to yellowish liquid

### HYDROCHLORIC ACID 0.1 MOL/L (0.1 N)

- 3.646 g HCl/l H<sub>2</sub>O = 0.1 N (±0.0002/20 °C)
- Density 1.00 g/ml
- UN-No. 1789
- ADR 8, III

### GHS

- H290
- P390



Quantity	Packaging material	Art. no.
1 l	Plastic bottle	841.1000
5 l	Polytainer	841.5000
5 l	Plastic canister	841.5011
10 l	Polytainer	841.9510

### HYDROCHLORIC ACID 0.1 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 N)

- traceable to NIST
- UN-No. 1789
- ADR 8, III

### GHS

- H290
- P390



### Specification

- Accuracy (20 °C) ±0.1 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	808.1011

### HYDROCHLORIC ACID 0.5 MOL/L (0.5 N)

- 18.23 g HCl/l H<sub>2</sub>O = 0.5 N (±0.001/20 °C)
- Density 1.01 g/ml
- UN-No. 1789
- ADR 8, III

### GHS

- H290
- P390



Quantity	Packaging material	Art. no.
1 l	Plastic bottle	845.1000
5 l	Polytainer	845.5000

### HYDROCHLORIC ACID 1.0 MOL/L (1.0 N)

- 36.461 g HCl/l H<sub>2</sub>O = 1.0 N (±0.002/20 °C)
- Density 1.02 g/ml
- UN-No. 1789
- ADR 8, III

### GHS

- H290
- P390



Quantity	Packaging material	Art. no.
1 l	Plastic bottle	850.1000
5 l	Polytainer	850.5000
10 l	Polytainer	850.9510



**HYDROCHLORIC ACID 1.0 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (1.0 N)**

- traceable to NIST
- UN-No. 1789
- ADR 8, III

**GHS**

- H290
- P390



**Specification**

- Accuracy (20 °C) ±0.1 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	819.1011

**HYDROCHLORIC ACID 2.0 MOL/L (2.0 N)**

- 72.922 g HCl/l H<sub>2</sub>O = 2.0 N (±0.004/20 °C)
- Density 1.04 g/ml
- UN-No. 1789
- ADR 8, III

**GHS**

- H290
- P390



Quantity	Packaging material	Art. no.
1 l	Plastic bottle	860.1000

**HYDROCHLORIC ACID TECHNICAL GRADE (14.0 – 16.0 %)**

- HCl
- UN no. 1789
- ADR 8,11

**GHS**

- H290 H314 H335
- P260 P271 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P390 P405+P233 P501



**Specification**

- Iron (Fe) max. 5 mg/kg
- Sulphate (SO<sub>4</sub>) max. 500 ppm

Quantity	Packaging material	Art. no.
10 kg	Plastic canister	869.9010

**HYDROCHLORIC ACID TECHNICAL GRADE (30.0 – 33.0 %)**

- HCl
- Density 1.15 g/ml
- UN-No. 1789
- ADR 8, II

**GHS**

- H290 H314 H335
- P260 P271 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P390 P403+P233 P501



**Specification**

- Melting point -40 – -25 °C
- Boiling point ~85 °C
- Iron (Fe) max. 5 mg/kg
- Sulphate (SO<sub>4</sub>) max. 500 ppm

Quantity	Packaging material	Art. no.
10 l	Plastic canister	889.9010

## HYDROCHLORIC ACID PURISS. (MIN. 25.0 %)

- HCl
- Density 1.12 g/ml
- UN-No. 1789
- ADR 8, II

### GHS

- H290 H314 H335
- P260 P271 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390  
P403+P233 P501



### Specification

- Residue on ignition max. 0.002 %
- Arsenic (As) max. 0.00005 %
- Iron (Fe) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0001 %
- Chloride (Cl) max. 0.0001 %
- Sulphate (SO<sub>4</sub>) max. 0.0002 %
- Sulphite (SO<sub>3</sub>) max. 0.0005 %
- Residue on evaporation max. 0.005 %

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	825.2511

## HYDROCHLORIC ACID P. A. (MIN. 25.0 %)

- HCl
- Density 1.12 g/ml
- UN-No. 1789
- ADR 8, II

### GHS

- H290 H314 H335
- P260 P271 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390  
P403+P233 P501



### Specification

- Residue on ignition max. 0.0005 %
- Aluminium (Al) max. 0.000005 %
- Arsenic (As) max. 0.000001 %
- Barium (Ba) max. 0.000002 %
- Beryllium (Be) max. 0.00002 %
- Bismuth (Bi) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000001 %
- Cobalt (Co) max. 0.000001 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00002 %
- Germanium (Ge) max. 0.000005 %
- Potassium (K) max. 0.00001 %
- Lithium (Li) max. 0.000001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000001 %
- Molybdenum (Mo) max. 0.000002 %
- Sodium (Na) max. 0.00005 %
- Nickel (Ni) max. 0.00002 %
- Lead (Pb) max. 0.000002 %
- Strontium (Sr) max. 0.000001 %
- Titanium (Ti) max. 0.00001 %
- Thallium (Tl) max. 0.000005 %
- Vanadium (V) max. 0.000001 %
- Zinc (Zn) max. 0.000005 %
- Zirconium (Zr) max. 0.00001 %
- Bromide (Br) max. 0.005 %
- Free chlorine (Cl<sub>2</sub>) max. 0.00005 %
- Phosphate (PO<sub>4</sub>) max. 0.00005 %
- Sulphate (SO<sub>4</sub>) max. 0.0001 %
- Sulphite (SO<sub>3</sub>) max. 0.0001 %
- Ammonium (NH<sub>4</sub>) max. 0.0001 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	892.1011
2.5 l	Glass bottle	892.2500
2.5 l	Plastic bottle	892.2511
25 l	Plastic canister	892.9025

**HYDROCHLORIC ACID P. A., ISO, PH. EUR. (MIN. 32.0 %)**

- HCl
- Density 1.16 g/ml
- UN-No. 1789
- ADR 8, II

**GHS**

- H290 H314 H335
- P260 P271 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P390 P403+P233 P501



**Specification**

- Melting point -40 °C
- Residue on ignition max. 0.0005 %
- Ammonium (NH<sub>4</sub>) max. 0.0001 %
- Aluminium (Al) max. 0.000005 %
- Arsenic (As) max. 0.000001 %
- Barium (Ba) max. 0.000002 %
- Bismuth (Bi) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000001 %
- Cobalt (Co) max. 0.000001 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00002 %
- Germanium (Ge) max. 0.000005 %
- Potassium (K) max. 0.00001 %
- Lithium (Li) max. 0.000001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000001 %
- Molybdenum (Mo) max. 0.000002 %
- Sodium (Na) max. 0.00005 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.000002 %
- Strontium (Sr) max. 0.000001 %
- Titanium (Ti) max. 0.00001 %
- Thallium (Tl) max. 0.000005 %
- Vanadium (V) max. 0.000001 %
- Zinc (Zn) max. 0.000005 %
- Zirconium (Zr) max. 0.00001 %
- Bromide (Br) max. 0.005 %
- Free chlorine (Cl<sub>2</sub>) max. 0.00005 %
- Phosphate (PO<sub>4</sub>) max. 0.00005 %
- Sulphate (SO<sub>4</sub>) max. 0.0001 %
- Sulphite (SO<sub>3</sub>) max. 0.0001 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	871.1000
2.5 l	Glass bottle	871.2500

**HYDROCHLORIC ACID P. A. (MIN. 37.0 %)**

- HCl
- Density 1.17 g/ml
- UN-No. 1789
- ADR 8, II

**GHS**

- H290 H314 H335
- P260 P271 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P390 P403+P233 P501



**Specification**

- Melting point -40 – -25 °C
- Boiling point ~85 °C
- Residue on ignition max. 0.0005 %
- Sulphate (SO<sub>4</sub>) max. 0.0001 %
- Sulphite (SO<sub>3</sub>) max. 0.0002 %
- Free chlorine (Cl<sub>2</sub>) max. 0.00005 %
- Ammonium (NH<sub>4</sub>) max. 0.0003 %
- Arsenic (As) max. 0.000005 %
- Zinc (Zn) max. 0.0001 %
- Cadmium (Cd) max. 0.000001 %
- Lead (Pb) max. 0.000005 %
- Iron (Fe) max. 0.00005 %
- Copper (Cu) max. 0.000005 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	836.1000
2.5 l	Glass bottle	836.2500
2.5 l	Plastic bottle	836.2511
5 l	Plastic bottle	836.5000
20 l	Plastic canister	836.9020

## HYDROCHLORIC ACID SUPERPURE FOR TRACE ANALYSIS (34.0 – 37.0 % W/W)

- HCL
- UN-No. 1789
- ADR 8, II

### GHS

- H290 H314 H335
- P260 P271 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390  
P403+P233 P501



### Specification

- Colour (APHA) max. 10
- Bromide (Br) max. 10 ppm
- Free chlorine (Cl<sub>2</sub>) max. 0.5 ppm
- Total phosphorus (P) max. 0.01 ppm
- Total sulphur (S) max. 0.3 ppm
- Aluminium (Al) max. 1 ppb
- Antimony (Sb) max. 0.5 ppb
- Arsenic (As) max. 0.5 ppb
- Barium (Ba) max. 0.1 ppb
- Beryllium (Be) max. 0.1 ppb
- Bismuth (Bi) max. 0.1 ppb
- Boron (B) max. 1 ppb
- Cadmium (Cd) max. 0.1 ppb
- Calcium (Ca) max. 1 ppb
- Cerium (Ce) max. 0.1 ppb
- Caesium (Cs) max. 0.1 ppb
- Chromium (Cr) max. 0.5 ppb
- Cobalt (Co) max. 0.1 ppb
- Copper (Cu) max. 0.5 ppb
- Dysprosium (Dy) max. 0.1 ppb
- Erbium (Er) max. 0.1 ppb
- Europium (Eu) max. 0.1 ppb
- Gadolinium (Gd) max. 0.1 ppb
- Gallium (Ga) max. 0.1 ppb
- Gold (Au) max. 0.5 ppb
- Hafnium (Hf) max. 0.1 ppb
- Holmium (Ho) max. 0.1 ppb
- Indium (In) max. 0.1 ppb
- Iron (Fe) max. 1 ppb
- Lanthanum (La) max. 0.1 ppb
- Lead (Pb) max. 0.1 ppb
- Lithium (Li) max. 0.1 ppb
- Lutetium (Lu) max. 0.1 ppb
- Magnesium (Mg) max. 0.5 ppb
- Manganese (Mn) max. 0.1 ppb
- Mercury (Hg) max. 0.1 ppb
- Molybdenum (Mo) max. 0.1 ppb
- Neodymium (Nd) max. 0.1 ppb
- Nickel (Ni) max. 0.5 ppb
- Niobium (Nb) max. 0.1 ppb
- Potassium (K) max. 1 ppb
- Praseodymium (Pr) max. 0.1 ppb
- Rhenium (Re) max. 0.1 ppb
- Rhodium (Rh) max. 0.1 ppb

- Rubidium (Rb) max. 0.1 ppb
- Ruthenium (Ru) max. 0.1 ppb
- Samarium (Sm) max. 0.1 ppb
- Scandium (Sc) max. 0.1 ppb
- Selenium (Se) max. 1 ppb
- Silver (Ag) max. 1 ppb
- Sodium (Na) max. 1 ppb
- Strontium (Sr) max. 0.1 ppb
- Tellurium (Te) max. 0.1 ppb
- Terbium (Tb) max. 0.1 ppb
- Thallium (Tl) max. 0.1 ppb
- Thorium (Th) max. 0.1 ppb
- Thulium (Tm) max. 0.1 ppb
- Tin (Sn) max. 0.5 ppb
- Titanium (Ti) max. 0.5 ppb
- Tungsten (W) max. 0.1 ppb
- Uranium (U) max. 0.1 ppb
- Vanadium (V) max. 0.5 ppb
- Ytterbium (Yb) max. 0.1 ppb
- Yttrium (Y) max. 0.1 ppb
- Zinc (Zn) max. 1 ppb
- Zirconium (Zr) max. 0.1 ppb

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	857.1011

## HYDROGEN PEROXIDE

- H<sub>2</sub>O<sub>2</sub>
- M = 34.01 g/mol
- CAS no. 7722-84-1
- EC Index no. 008-003-00-9
- EC no. 231-765-0
- UN-No. 2014
- ADR 5.1 (8), II

### GHS

- H272 H302+H332 H314
- P280 P301+P312 P305+P351+P338  
P310 P405 P501



### Specification

- Clear, colourless liquid
- Melting point -26 °C
- Boiling point 107 °C

## HYDROGEN PEROXIDE PURISS., PH. EUR. (MIN. 25 % W/W (STAB.))

### Specification

- Non-volatile substances max. 0.02 %
- Free acid max. 0.02 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.005 %
- Phosphate (PO<sub>4</sub>) max. 0.05 %
- Arsenic (As) max. 0.0003 %
- Copper (Cu) max. 0.002 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.002 %

Quantity	Packaging material	Art. no.
20 l	Plastic canister	410.9020

**HYDROGEN PEROXIDE TECHNICAL (MIN. 30.0 %)**

- Density (20 °C) 1.110 – 1.115 g/cm<sup>3</sup>

**Specification**

- Free acid max. 5 mmol/l
- pH (original solution) max. 5.0
- Decomposition rate max. 4.0

Quantity	Packaging material	Art. no.
30 kg	Plastic canister	445.9030

**HYDROGEN PEROXIDE PURISS., PH. EUR., PH. NORD. (MIN. 30.0 % W/W (STAB.))**

- Density 1.11 g/ml

**Specification**

- Non-volatile substances max. 0.02 %
- Free acid max. 0.02 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.005 %
- Phosphate (PO<sub>4</sub>) max. 0.05 %
- Arsenic (As) max. 0.0003 %
- Copper (Cu) max. 0.002 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.002 %
- Stabilized with phosphate

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	476.1011
2.5 l	Plastic bottle	476.2511

**HYDROGEN PEROXIDE P. A., PH. NORD. (MIN. 30.0 % W/W (STAB.))**

- Density 1.11 g/ml

**Specification**

- Non-volatile substances max. 50 ppm
- Free acids (as H<sub>2</sub>SO<sub>4</sub>) max. 40 ppm
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.5 ppm
- Phosphate (PO<sub>4</sub>) max. 1 ppm
- Sulphate (SO<sub>4</sub>) max. 1 ppm
- Nitrogen (N) max. 4 ppm
- Aluminium (Al) max. 0.5 ppm
- Arsenic (As) max. 0.01 ppm
- Barium (Ba) max. 0.05 ppm
- Beryllium (Be) max. 0.01 ppm
- Bismuth (Bi) max. 0.1 ppm
- Calcium (Ca) max. 0.2 ppm
- Cadmium (Cd) max. 0.01 ppm
- Cobalt (Co) max. 0.01 ppm
- Chromium (Cr) max. 0.02 ppm
- Copper (Cu) max. 0.01 ppm
- Iron (Fe) max. 0.05 ppm
- Germanium (Ge) max. 0.05 ppm
- Potassium (K) max. 0.1 ppm
- Lithium (Li) max. 0.01 ppm
- Magnesium (Mg) max. 0.05 ppm
- Manganese (Mn) max. 0.01 ppm
- Molybdenum (Mo) max. 0.02 ppm
- Sodium (Na) max. 0.1 ppm
- Nickel (Ni) max. 0.02 ppm
- Lead (Pb) max. 0.01 ppm
- Strontium (Sr) max. 0.01 ppm
- Titanium (Ti) max. 0.1 ppm
- Thallium (Tl) max. 0.05 ppm
- Vanadium (V) max. 0.01 ppm
- Zinc (Zn) max. 0.05 ppm
- Zirconium (Zr) max. 0.1 ppm
- Residue on evaporation max. 0.005 %
- Stabilized with phosphate

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	437.1011

## HYDROGEN PEROXIDE 30 % VLSI (30.0 – 32.0 % W/W)

- Density 1.13 g/ml

### Specification

- Colour (APHA) max. 5
- Total organic carbon (TOC) max. 20 ppm
- Chloride (Cl) max. 0.030 ppm
- Phosphate (PO<sub>4</sub>) max. 0.100 ppm
- Sulphate (SO<sub>4</sub>) max. 0.100 ppm
- Acidity max. 0.6 meq/g
- Silver (Ag) max. 1 ppb
- Aluminium (Al) max. 1 ppb
- Arsenic (As) max. 1 ppb
- Gold (Au) max. 1 ppb
- Boron (B) max. 1 ppb
- Barium (Ba) max. 1 ppb
- Beryllium (Be) max. 1 ppb
- Bismuth (Bi) max. 1 ppb
- Calcium (Ca) max. 1 ppb
- Cadmium (Cd) max. 1 ppb
- Cobalt (Co) max. 1 ppb
- Chromium (Cr) max. 1 ppb
- Copper (Cu) max. 1 ppb
- Iron (Fe) max. 1 ppb
- Gallium (Ga) max. 1 ppb
- Germanium (Ge) max. 1 ppb
- Potassium (K) max. 1 ppb
- Lithium (Li) max. 1 ppb
- Magnesium (Mg) max. 1 ppb
- Manganese (Mn) max. 1 ppb
- Molybdenum (Mo) max. 1 ppb
- Sodium (Na) max. 1 ppb
- Niobium (Nb) max. 1 ppb
- Nickel (Ni) max. 1 ppb
- Lead (Pb) max. 1 ppb
- Antimony (Sb) max. 1 ppb
- Tin (Sn) max. 1 ppb
- Strontium (Sr) max. 1 ppb
- Tantalum (Ta) max. 1 ppb
- Titanium (Ti) max. 1 ppb
- Thallium (Tl) max. 1 ppb
- Vanadium (V) max. 1 ppb
- Zinc (Zn) max. 1 ppb
- Zirconium (Zr) max. 1 ppb
- Particle count >0.5 µm max. 150 P/ml
- Particle count >1.0 µm max. 25 P/ml

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	452.2500

## IMIDAZOLE P. A., ACS (MIN. 99.0 %)

- C<sub>3</sub>H<sub>4</sub>N<sub>2</sub>
- M = 68.08 g/mol
- CAS no. 288-32-4
- EC Index no. 613-319-00-0
- EC no. 206-019-2
- Density 1.03 g/cm<sup>3</sup>
- UN-No. 3263
- ADR 8, III

### GHS

- H302 H314 H361
- P201 P260 P281 P301+P312
- P303+P361+P353 P305+P351+P338
- P308+P313 P405 P501



### Specification

- White to pale yellow crystals or flakes
- Boiling point 265 °C/1013 hPa
- Iron (Fe) max. 0.0005 %
- Water max. 0.2 %
- Sulphated ash max. 0.1 %
- Arsenic (As) max. 0.0002 %
- Copper (Cu) max. 0.001 %
- Lead (Pb) max. 0.0005 %
- pH (5 %, 25 °C) 9.5 – 11.0
- Residue on ignition max. 0.1 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9128.0500

## IODINE SOLUTION

### IODINE SOLUTION 0.05 MOL/L (0.1 N)

- 12.69 g I<sub>2</sub>/l H<sub>2</sub>O = 0.1 N (±0.0002/20 °C)
- Density 1.02 g/ml

### Specification

- Brown liquid
- Melting point 0 °C
- Boiling point 100 °C
- pH 5.8 – 6.2

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1805.1000
2.5 l	Glass bottle	1805.2500

### IODINE SOLUTION 0.05 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 N)

- traceable to NIST

### Specification

- Brown liquid
- Accuracy (20 °C) ±0.1 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1871.1000

**IODINE SOLUTION 0.1 MOL/L ACC. HANUS (0.2 N)**

- 2.68 g IBr/l CH<sub>3</sub>COOH 100 % = 0.2 N (±0.004/20 °C)
- Density 1.05 g/ml
- UN-No. 2789
- ADR 8 (3), II

**GHS**

- H226 H314
- P210 P243 P280 P303+P361+P353 P304+P340 P305+P351+P338 P501



**Specification**

- Colourless liquid

Quantity	Packaging material	Art. no.
1 l	Glass bottle	2284.1000

**IRON(III) CHLORIDE HEXAHYDRATE**

- FeCl<sub>3</sub> x 6 H<sub>2</sub>O
- M = 270.33 g/mol
- CAS no. 10025-77-1
- EC no. 231-729-4

**GHS**

- H302 H315 H318
- P280 P302+P352 P305+P351+P338 P313 P501



**Specification**

- Brown solid
- Melting point 37 °C
- Boiling point 200 °C (decomposition)

**IRON(III) CHLORIDE HEXAHYDRATE PURISS. (MIN. 99.0 %)**

**Specification**

- Free acid max. 0.2 %
- Arsenic (As) max. 0.005 %
- Iron(II) (Fe(II)) max. 0.05 %
- Heavy metals (as Pb) max. 0.05 %
- Free chlorine (Cl<sub>2</sub>) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2258.1000

**IRON(III) CHLORIDE HEXAHYDRATE P. A., PH. EUR. (MIN. 99.0 %)**

**Specification**

- Free acid max. 0.2 %
- Arsenic (As) max. 0.0005 %
- Copper (Cu) max. 0.002 %
- Iron(II) (Fe(II)) max. 0.005 %
- Lead (Pb) max. 0.002 %
- Zinc (Zn) max. 0.002 %
- Free chlorine (Cl<sub>2</sub>) max. 0.001 %
- Phosphate (PO<sub>4</sub>) max. 0.002 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.001 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	2254.0250
1 kg	Plastic bottle	2254.1000

## IRON(II) CHLORIDE TETRAHYDRATE P. A. (MIN. 99.0 %)

- $\text{FeCl}_2 \times 4 \text{H}_2\text{O}$
- M = 198.81 g/mol
- CAS no. 13478-10-9
- EC no. 231-843-4
- Density 1.93 g/cm<sup>3</sup>

### GHS

- H302 H315 H318
- P280 P302+P352 P305+P351+P338 P501



### Specification

- Green solid
- Melting point 110 °C
- Arsenic (As) max. 0.0005 %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.002 %
- Iron(III) (Fe(III)) max. 0.2 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Manganese (Mn) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.003 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %
- Nitrogen (N) max. 0.001 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2241.1000

## IRON(III) NITRATE NONAHYDRATE

- $\text{Fe}(\text{NO}_3)_3 \times 9 \text{H}_2\text{O}$
- M = 404.00 g/mol
- CAS no. 7782-61-8
- EC no. 233-899-5
- Density 1.68 g/cm<sup>3</sup>
- UN-No. 1466
- ADR 5.1, III

### GHS

- H272 H315 H319
- P302+P352 P305+P351+P338



### Specification

- Colourless to violet solid
- Melting point 43 °C (decomposition)

## IRON(III) NITRATE NONAHYDRATE PURISS. (MIN. 97.0 %)

### Specification

- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	2274.1000

## IRON(III) NITRATE NONAHYDRATE P. A., ACS (MIN. 98.0 %)

### Specification

- Arsenic (As) max. 0.0002 %
- Calcium (Ca) max. 0.005 %
- Cadmium (Cd) max. 0.001 %
- Copper (Cu) max. 0.001 %
- Iron (Fe(II)) max. 0.002 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.001 %
- Manganese (Mn) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.0005 %
- Phosphate (PO<sub>4</sub>) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	2217.0250
1 kg	Plastic bottle	2217.1000



**IRON(II) SULPHATE HEPTAHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)**

- $\text{FeSO}_4 \times 7 \text{H}_2\text{O}$
- M = 278.02 g/mol
- CAS no. 7782-63-0
- EC Index no. 026-003-01-4

- EC no. 231-753-5
- Density 1.89 g/cm<sup>3</sup>

**GHS**

- H302 H315 H317 H319
- P302+P352 P305+P351+P338 P501

**Specification**

- Green solid
- Melting point 64 °C
- Arsenic (As) max. 0.0002 %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.001 %
- Potassium (K) max. 0.002 %
- Manganese (Mn) max. 0.05 %
- Sodium (Na) max. 0.002 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.002 %
- Chloride (Cl) max. 0.001 %
- Phosphate ( $\text{PO}_4$ ) max. 0.001 %
- Nitrogen (N) max. 0.001 %
- Substances not precipitated by ammonia max. 0.1 %
- Insoluble matter max. 0.01 %
- Magnesium (Mg) max. 0.002 %
- Iron (Fe(III)) max. 0.1 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	2276.0100
1 kg	Plastic bottle	2276.1000
5 kg	Plastic bottle	2276.5000

**ISOAMYL ALCOHOL P. A. (MIN. 97.0 %)**

- $\text{C}_5\text{H}_{12}\text{O}$
- M = 88.148 g/mol
- CAS no. 123-51-3
- EC Index no. 603-006-00-7
- EC no. 204-633-5

- Density (20 °C) 0.805 – 0.813 g/ml
- UN-No. 1105
- ADR 3, III

**GHS**

- H226 H332 H335 EUH066
- P210 P241 P243 P303+P361+P353  
P304+P340 P403+P235 P501

**Specification**

- Clear, colourless liquid
- Melting point -117 °C
- Boiling point 130.5 – 132.5 °C
- Identity complies
- Refractive index (20 °C) 1.4023 – 1.4083
- Water (KF) max. 0.5 %
- Acidity max. 0.002 meq/g
- Acids and esters max. 0.2 %
- Carbonyl compounds (as HCHO) max. 0.1 %
- Residue on evaporation max. 30 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1831.1000

**ISOBUTANOL P. A. (MIN. 99.0 %)**

- $\text{C}_4\text{H}_{10}\text{O}$
- M = 74.12 g/mol
- CAS no. 78-83-1
- EC Index no. 603-108-00-1
- EC no. 201-148-0

- Density 0.801 – 0.803 g/ml
- UN-No. 1212
- ADR 3, III

**GHS**

- H226 H315 H318 H335 H336
- P210 P241 P264 P280 P303+P361+P353  
P304+P340 P305+P351+P338  
P403+P235 P501

**Specification**

- Clear liquid
- Melting point -107.8 °C
- Boiling point 105 – 109 °C
- Identity (IR) complies
- Colour (APHA) max. 10
- Fluorescence complies
- Solubility in water complies
- Refractive index (20 °C) 1.3945 – 1.3975
- Water (KF) max. 0.1 %
- Residue on evaporation max. 10 ppm
- Carbonyl compounds max. 100 ppm
- Acidity (as  $\text{CH}_3\text{COOH}$ ) max. 100 ppm
- Alkalinity (as  $\text{NH}_3$ ) max. 10 ppm
- Indole ( $\text{C}_8\text{H}_7\text{N}$ ) max. 0.1 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1870.1000

## ISOOCTANE P. A., ACS, PH. EUR. (MIN. 99.5 %)

- C<sub>8</sub>H<sub>18</sub>
- M = 114.23 g/mol
- CAS no. 540-84-1
- EC Index no. 601-009-00-8
- EC no. 208-759-1
- Density 0.69 g/ml
- UN-No. 1262
- ADR 3, II

### GHS

- H225 H304 H315 H336 H400
- P210 P233 P241 P243 P261 P271 P273 P280 P301+P310 P303+P361+P353 P304+P340 P312 P331 P332+P313 P391 P403+P235 P405 P501



### Specification

- Colourless liquid
- Melting point -107 °C
- Boiling point 99 °C
- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Free acid max. 0.0005 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Sulphur (S) max. 0.005 %
- Residue on evaporation max. 0.001 %
- Acidity max. 0.0003 meq/g
- Colour (APHA) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1857.1000
2.5 l	Glass bottle	1857.2500

## ISOPROPANOL 70 BIOCID (MIN. 69.0 %)

- CH<sub>3</sub>CH(OH)CH<sub>3</sub>
- Density (20 °C) 0.8593 – 0.8639 g/ml
- UN-No. 1219
- ADR 3, II

### GHS

- H225 H319 H336
- P210 P233 P241 P243 P261 P280 P305+P351+P338 P312 P403+P235 P501



### Specification

- Refractive index 1.3780 – 1.3737

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1150.1000
5 l	Plastic canister	1150.5000
10 l	Plastic canister	1150.9010
25 l	Plastic canister	1150.9025

## KJELDAHL TABLETS

### KJELDAHL TABLETS ANTIFOAM S (SODIUM SULPHATE 0.97 G/SILICONE ANTIFOAM 0.03 G)

#### Specification

- Off-white, mottled flat tablets capable of being crumbled by hand
- Average weight range 0.98 – 1.03 g
- Weight uniformity max. 10 % outside 0.95 – 1.10 g, none outside 0.90 – 1.15 g
- Diameter 10 – 12 mm
- Friability max. 10 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1640.0500
1000 Tablets	Metal box	1640.1000



2-Propanol → see page 261 f.

**KJELDAHL TABLETS S (POTASSIUM SULPHATE 5.0 G/SELENIUM 5.0 MG)****Specification**

- Pale grey, flat tablets
- Average weight range 4.85 – 5.15 g
- Weight uniformity max. 10 % outside 4.75 – 5.25 g, none outside 4.65 – 5.35 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1641.0500
1000 Tablets	Metal box	1641.1000

**KJELDAHL TABLETS W (WIENINGER METHOD) 5.0 G (SODIUM SULPHATE/COPPER(II) SULPHATE/SELENIUM 97.5 : 1.5 : 1)****Specification**

- Dark grey tablets with green or blue specks
- Average weight range 4.85 – 5.15 g
- Weight uniformity max. 10 % outside 4.75 – 5.25 g, none outside 4.65 – 5.35 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %
- Copper sulphate x 5 H<sub>2</sub>O (CuSO<sub>4</sub> x 5 H<sub>2</sub>O) 62 – 82 mg/tablet

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1642.0500
1000 Tablets	Metal box	1642.1000

**KJELDAHL TABLETS C (POTASSIUM SULPHATE 5.0 G/COPPER(II) SULPHATE 0.1 G)****Specification**

- Green or blue flat tablets
- Average weight range 4.95 – 5.25 g
- Weight uniformity max. 10 % outside 4.85 – 5.35 g, none outside 4.70 – 5.50 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %
- Copper sulphate x 5 H<sub>2</sub>O (CuSO<sub>4</sub> x 5 H<sub>2</sub>O) 90 – 110 mg/tablet

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1643.0500
1000 Tablets	Metal box	1643.1000

**KJELDAHL TABLETS CX (POTASSIUM SULPHATE 5.0 G/COPPER(II) SULPHATE 0.5 G)****GHS**

- H411
- P501

**Specification**

- Green or blue speckled flat tablets
- Average weight range 5.35 – 5.65 g
- Weight uniformity max. 10 % outside 5.20 – 5.80 g, none outside 5.10 – 5.90 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %
- Copper sulphate x 5 H<sub>2</sub>O (CuSO<sub>4</sub> x 5 H<sub>2</sub>O) 450 – 550 mg/tablet

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1644.0500
1000 Tablets	Plastic box	1644.1000

## KJELDAHL TABLETS PS (POTASSIUM SULPHATE 5.0 G)

### GHS

- P501

### Specification

- Off-white, flat tablets
- Average weight range 4.85 – 5.15 g
- Weight uniformity max. 10 % outside 4.75 – 5.25 g, none outside 4.65 – 5.35 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1645.0500
1000 Tablets	Metal box	1645.1000

## KJELDAHL TABLETS NA (SODIUM SULPHATE 1.0 G)

### GHS

- P501

### Specification

- White, round, flat tablets
- Average weight range 950 – 1050 mg
- Weight uniformity max. 10 % outside 925 – 1075 mg, none outside 900 – 1100 mg
- Diameter 10 – 12 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1649.0500
1000 Tablets	Plastic box	1649.1000

## KJELDAHL TABLETS NAS (SODIUM SULPHATE 1.0 G/SELENIUM 0.05 G)

### GHS

- H302+H332 H373
- P501



### Specification

- Dark grey speckled, round, flat or FBE tablets
- Average weight range 1.008 – 1.092 g
- Weight uniformity max. 10 % outside 0.971 – 1.129 g, none outside 0.945 – 1.155 g
- Diameter 12 – 14 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1650.0500
1000 Tablets	Plastic box	1650.1000

## KJELDAHL TABLETS NAC (SODIUM SULPHATE 1.0 G/COPPER(II) SULPHATE 0.1 G)

### GHS

- H411
- P501



### Specification

- Blue speckled tablets
- Average weight range 1.065 – 1.155 g
- Weight uniformity max. 10 % outside 1.018 – 1.182 g, none outside 0.990 – 1.210 g
- Diameter 12 – 14 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %
- Copper sulphate x 5 H<sub>2</sub>O (CuSO<sub>4</sub> x 5 H<sub>2</sub>O) 90 – 110 mg/tablet

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1651.0500
1000 Tablets	Metal box	1651.1000

**KJELDAHL TABLETS NACT (SODIUM SULPHATE 1.0 G/COPPER(II) SULPHATE 0.03 G/TITANIUM DIOXIDE 0.03 G)**

**Specification**

- White tablets with blue specks
- Average weight range 1.007 – 1.113 g
- Weight uniformity max. 10 % outside 0.980 – 1.140 g, none outside 0.954 – 1.1656 g
- Diameter 12.5 – 13.5 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %
- Copper sulphate (CuSO<sub>4</sub>) 28 – 32 mg/tablet

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1652.0500
1000 Tablets	Plastic box	1652.1000

**KJELDAHL TABLETS KS 5.0 G (POTASSIUM SULPHATE/SELENIUM 100 : 1)**

**Specification**

- Grey, round, flat tablets
- Average weight range 4.90 – 5.10 g
- Weight uniformity max. 10 % outside 4.75 – 5.25 g, none outside 4.65 – 5.35 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1653.0500
1000 Tablets	Metal box	1653.1000

**KJELDAHL TABLETS MISSOURI (POTASSIUM SULPHATE/COPPER SULPHATE)**

- UN-No. 2588
- ADR 6.1, III
- GHS**
- H412
- P501

**Specification**

- White tablets with green or blue specks
- Average weight range 4.75 – 5.25 g
- Weight uniformity max. 10 % outside 4.625 – 5.375 g, none outside 4.50 – 5.50 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %
- Chloride (Cl) max. 1.0 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1654.0500
1000 Tablets	Metal box	1654.1000

**KJELDAHL TABLETS CL (POTASSIUM SULPHATE 5.0 G/COPPER(II) SULPHATE 0.15 G)**

**GHS**

- H411
- P501



**Specification**

- White to pale blue, round, flat tablets, with blue specks
- Average weight range 4.893 – 5.407 g
- Weight uniformity max. 10 % outside 4.764 – 5.530 g, none outside 4.635 – 5.665 g
- Diameter 18 – 20 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1656.0500
1000 Tablets	Metal box	1656.1000



## KJELDAHL TABLETS CM (POTASSIUM SULPHATE 3.5 G/COPPER(II) SULPHATE 0.1 G)

### GHS

- H411
- P501



### Specification

- Blue speckled, round, flat tablets
- Average weight range 3.42 – 3.78 g
- Weight uniformity max. 10 % outside 3.333 – 3.870 g, none outside 3.24 – 5.96 g
- Diameter 15 – 17 mm
- Friability max. 5 %
- Nitrogen (N) max. 0.05 %
- Copper sulphate x 5 H<sub>2</sub>O (CuSO<sub>4</sub> x 5 H<sub>2</sub>O) 90 – 110 mg/tablet

Quantity	Packaging material	Art. no.
500 Tablets	Plastic box	1658.0500
1000 Tablets	Metal box	1658.1000

## LANTHANUM NITRATE HEXAHYDRAT Z. A. (MIN. 98.0 %)

- La(NO<sub>3</sub>)<sub>3</sub> x 6 H<sub>2</sub>O
- M = 433.02 g/mol
- CAS no. 10277-43-7
- EC no. 233-238-0
- Density ~1.3 g/cm<sup>3</sup>
- UN-No. 1477
- ADR 5.1, II

### GHS

- H272 H315 H318 H335
- P220 P280 P304+P340 P305+P351+P338 P403+P235 P501



### Specification

- White, crystalline powder
- Melting point 69.9 °C
- Boiling point ~126 °C
- Identity complies
- Iron (Fe) max. 10 ppm

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1505.0100

## LEAD(II) ACETATE TRIHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)

- Pb(CH<sub>3</sub>COO)<sub>2</sub> x 3 H<sub>2</sub>O
- M = 379.33 g/mol
- CAS no. 6080-56-4
- EC Index no. 082-005-00-8
- EC no. 206-104-4
- UN-No. 1616
- ADR 6.1, III

### GHS

- H360 H373 H410
- P273 P281 P308+P313 P314



### Specification

- Colourless to white solid
- Melting point 75 °C
- Insoluble matter max. 0.005 %
- Calcium (Ca) max. 0.005 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Nitrate (NO<sub>3</sub>) max. 0.001 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1146.0250

**LEAD(II) NITRATE P. A., ACS, PH. EUR. (99 – 101 %)**

- $\text{Pb}(\text{NO}_3)_2$
- M = 331.21 g/mol
- CAS no. 10099-74-8
- EC Index no. 082-001-00-6
- EC no. 233-245-9
- Density 4.53 g/cm<sup>3</sup>
- UN-No. 1469
- ADR 5.1 (6.1), II

**GHS**

- H302+H332 H360Df H373 H410 EUH201
- P201 P260 P264 P270 P271 P273 P280 P301+P312 P304+P340 P308+P313 P314 P391 P405 P501

**Specification**

- Colourless to white solid
- Melting point 470 °C (decomposition)
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Chloride (Cl) max. 0.0005 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1159.0100

**LEAD(II) NITRATE SOLUTION ACC. PH. EUR. CHAPTER 4.2.2**

- traceable to NIST
- UN-No. 3082
- ADR 9, III

**GHS**

- H315 H318
- P280 P305+P351+P338 P310 P321 P362+P364 P332+P313

**Specification**

- Colourless liquid
- Assay (20 °C) 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2514.1011

**LITHIUM HYDROXIDE MONOHYDRATE P. A. (MIN. 98.0 %)**

- $\text{LiOH} \cdot \text{H}_2\text{O}$
- M = 41.96 g/mol
- CAS no. 1310-66-3
- EC no. 215-183-4
- Density 1.51 g/cm<sup>3</sup>
- UN-No. 2680
- ADR 8, II

**GHS**

- H301 H314
- P280 P301+P330+P331 P305+P351+P338 P308+P313

**Specification**

- Colourless to white solid
- Melting point 462 °C
- Boiling point 964 °C
- Lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) max. 1 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.01 %
- Sodium (Na) max. 0.01 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1544.1000

## MAGNESIUM ACETATE TETRAHYDRATE P. A., ACS (MIN. 99.5 %)

- $\text{Mg}(\text{CH}_3\text{COO})_2 \times 4 \text{H}_2\text{O}$
- M = 214.46 g/mol
- CAS no. 16674-78-5
- EC no. 205-554-9
- Density 1.45 g/cm<sup>3</sup>

### Specification

- Colourless to white solid
- Melting point 80 °C
- Barium (Ba) max. 0.001 %
- Calcium (Ca) max. 0.01 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.001 %
- Manganese (Mn) max. 0.001 %
- Sodium (Na) max. 0.001 %
- Strontium (Sr) max. 0.001 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0002 %
- Chloride (Cl) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.001 %
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1405.1000

## MAGNESIUM CHLORIDE HEXAHYDRATE P. A., ACS, ISO (MIN. 99.0 %)

- $\text{MgCl}_2 \times 6 \text{H}_2\text{O}$
- M = 203.30 g/mol
- CAS no. 7791-18-6
- EC no. 232-094-6
- Density 1.57 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Melting point 117 °C
- Ammonium (NH<sub>4</sub>) max. 0.001 %
- Barium (Ba) max. 0.002 %
- Calcium (Ca) max. 0.01 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.001 %
- Manganese (Mn) max. 0.0005 %
- Sodium (Na) max. 0.001 %
- Strontium (Sr) max. 0.002 %
- Zinc (Zn) max. 0.001 %
- Heavy metals (as Pb) max. 0.0005 %
- Nitrate (NO<sub>3</sub>) max. 0.001 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- pH (5 % solution) 5.0 – 6.5
- Total nitrogen (N) max. 0.002 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1420.0250
1 kg	Plastic bottle	1420.1000
5 kg	Plastic bottle	1420.5000

## MAGNESIUM SULPHATE ANHYDROUS PURISS. (MIN. 98.0 %)

- $\text{MgSO}_4$
- M = 120.37 g/mol
- CAS no. 7487-88-9
- EC no. 231-298-2
- Density 2.66 g/cm<sup>3</sup>

### Specification

- Colourless to white solid
- Melting point 1124 °C
- Loss on drying ±1 %
- Chloride (Cl) max. 0.001 %
- Nitrogen (N) max. 0.004 %
- Heavy metals (as Pb) max. 0.001 %
- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.04 %
- Iron (Fe) max. 0.001 %
- Manganese (Mn) max. 0.002 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1487.1000





**MAGNESIUM SULPHATE HEPTAHYDRATE P. A., ACS, PH. EUR. (MIN. 99.5 %)**

- $\text{MgSO}_4 \times 7 \text{H}_2\text{O}$
- M = 246.48 g/mol
- CAS no. 10034-99-8
- EC no. 231-298-2
- Density 1.68 g/cm<sup>3</sup>

**Specification**

- Colourless powder
- Ammonium ( $\text{NH}_4$ ) max. 0.002 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0001 %
- Potassium (K) max. 0.001 %
- Manganese (Mn) max. 0.0005 %
- Sodium (Na) max. 0.001 %
- Zinc (Zn) max. 0.002 %
- Chloride (Cl) max. 0.0003 %
- Nitrate ( $\text{NO}_3$ ) max. 0.002 %
- Nitrogen (N) max. 0.002 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0001 %
- Chromium (Cr) max. 0.0001 %
- Nickel (Ni) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %
- pH (5 %, 25 °C) 5.0 – 8.2
- Insoluble matter max. 0.005 %
- Strontium (Sr) max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1423.1000
5 kg	Plastic bottle	1423.5000

**MANGANESE(II) CHLORIDE TETRAHYDRATE P. A., ACS (MIN. 99.0 %)**

- $\text{MnCl}_2 \times 4 \text{H}_2\text{O}$
- M = 197.91 g/mol
- CAS no. 13446-34-9
- EC no. 231-869-6
- Density 2.01 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III
- GHS
- H302 H411
- P273 P501

**Specification**

- Pink solid
- Melting point 650 °C
- Boiling point 1190 °C (decomposition)
- Calcium (Ca) max. 0.001 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.001 %
- Magnesium (Mg) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Nickel (Ni) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Reducing substances max. 0.0005 %
- pH (5 %, 25 °C) 3.5 – 6.0
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1410.0100

**MANGANESE(II) SULPHATE MONOHYDRATE P. A., ACS, PH. EUR. (MIN. 99.0 %)**

- $\text{MnSO}_4 \times \text{H}_2\text{O}$
- M = 169.02 g/mol
- CAS no. 10034-96-5
- EC Index no. 025-003-00-4
- EC no. 232-089-9
- Density 2.95 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III
- GHS
- H373 H411
- P273 P314 P501

**Specification**

- Pink solid
- Melting point 117 °C
- Loss on ignition  $\pm 11$  %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Nickel (Ni) max. 0.0005 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.005 %
- Chloride (Cl) max. 0.001 %
- Reducing substances max. 0.0005 %
- Insoluble matter max. 0.01 %
- Cadmium (Cd) max. 0.002 %
- Chromium (Cr) max. 0.003 %
- Heavy metals (as Pb) max. 0.002 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1418.0250
1 kg	Plastic bottle	1418.1000

## MERCURY(II) ACETAT P. A., ACS, PH. EUR. (MIN. 99.0 %)

- $\text{Hg}(\text{CH}_3\text{COO})_2$
- M = 318.68 g/mol
- CAS no. 1600-27-7
- EC Index no. 080-004-00-7
- EC no. 216-491-1
- Density 3.27 g/cm<sup>3</sup>
- UN-No. 1629
- ADR 6.1, II

### GHS

- H300+H310+H330 H373 H410
- P273 P280 P302+P352 P304+P340 P309 P310 P403+P233 P501



### Specification

- Colourless solid
- Melting point 178 – 180 °C
- Insoluble matter max. 0.01 %
- Iron (Fe) max. 0.001 %
- Mercury(I) (Hg) max. 0.3 %
- Heavy metals (as Pb) max. 0.002 %
- Chloride (Cl) max. 0.005 %
- Nitrate (NO<sub>3</sub>) max. 0.005 %

- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Residue on ignition max. 0.02 %

Quantity	Packaging material	Art. no.
50 g	Plastic bottle	1008.0050

## MERCURY(II) SULPHATE P. A., ACS (MIN. 99.0 %)

- $\text{HgSO}_4$
- M = 296.65 g/mol
- CAS no. 7783-35-9
- EC Index no. 080-002-00-6
- EC no. 231-992-5
- Density 6.47 g/cm<sup>3</sup>
- UN-No. 1645
- ADR 6.1, II

### GHS

- H290 H300+H310+H330 H314 H373 H410
- P273 P280 P301+P330+P331 P302+P352 P304+P340 P305+P351+P338 P309 P310 P403+P233 P501



### Specification

- Colourless solid
- Melting point 400 °C (decomposition)
- Calcium (Ca) max. 0.003 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Mercury(I) (Hg) max. 0.05 %
- Potassium (K) max. 0.002 %
- Magnesium (Mg) max. 0.003 %
- Sodium (Na) max. 0.005 %

- Lead (Pb) max. 0.0005 %
- Chloride (Cl) max. 0.003 %
- Nitrate (NO<sub>3</sub>) max. 0.005 %
- Residue on ignition max. 0.02 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1048.0250

## MERCURY SULPHATE SOLUTION

### MERCURY(II) SULPHATE SOLUTION FOR COD DETERMINATION (80 G $\text{HgSO}_4$ + 5.884 G $\text{K}_2\text{Cr}_2\text{O}_7$ /L 10.0 % $\text{H}_2\text{SO}_4$ = 0.12 N)

- Acc. DIN 38409-H41-1
- Density 1.18 g/ml
- UN-No. 3289
- ADR 8 (6.1), II

### GHS

- H290 H301+H331 H310 H315 H319 H340 H350 H360FD H373 H410
- P201 P234 P260 P273 P280 P301+P310 P304+P340 P308+P311 P361+P364 P390 P403+P233 P501



### Specification

- Orange liquid
- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1024.1000
2.5 l	Glass bottle	1024.2500

**MERCURY(II) SULPHATE SOLUTION FOR COD DETERMINATION (200 G HgSO<sub>4</sub>/L 10.0 % H<sub>2</sub>SO<sub>4</sub>)**

- Acc. DIN 38409-H43-1
- Density 1.30 g/ml
- UN-No. 3289
- ADR 8 (6.1), II
- GHS**
- H290 H300+H310+H330 H315 H319 H373 H410
- P260 P273 P280 P284 P304+P340 P310 P391 P403+P233 P405 P501



**Specification**

- Colourless liquid
- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1056.1000

**METHANOL**

- CH<sub>3</sub>OH
- M = 32.04 g/mol
- CAS no. 67-56-1
- EC Index no. 603-001-00-X
- EC no. 200-659-6
- Density (20 °C) 0.79 – 0.793 g/ml
- UN-No. 1230
- ADR 3 (6.1), II
- GHS**
- H225 H301+H311+H331 H370
- P210 P280 P301+P310 P303+P361+P353 P304+P340 P405 P501



**Specification**

- Colourless liquid
- Melting point -98 °C
- Boiling point 65 °C

**METHANOL TECHNICAL GRADE (MIN. 99.0 %)**

**Specification**

- Water max. 0.2 %
- Non-volatile substances max. 0.005 %

Quantity	Packaging material	Art. no.
5 l	Plastic canister	1411.5000

**METHANOL PURISS., PH. EUR., DAB (MIN. 99.7 %)**

**Specification**

- Non-volatile substances max. 0.001 %
- Water max. 0.1 %
- Free acid max. 0.003 %
- Iron (Fe) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0002 %
- Chloride (Cl) max. 0.0001 %
- Sulphate (SO<sub>4</sub>) max. 0.0005 %
- Acetone (CH<sub>3</sub>COCH<sub>3</sub>) max. 0.001 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1462.1011
2.5 l	Plastic bottle	1462.2511
25 l	Plastic canister	1462.9025
200 l	Metal drum	1462.9200



## METHANOL P. A., ACS, ISO, PH. EUR. (MIN. 99.8 %)

### Specification

- Non-volatile substances max. 0.001 %
- Water max. 0.05 %
- Free alkali max. 0.00005 %
- Free acid max. 0.002 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000001 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000001 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.000002 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Chloride (Cl) max. 0.00005 %
- Sulphate (SO<sub>4</sub>) max. 0.0001 %
- Acetaldehyde (C<sub>2</sub>H<sub>4</sub>O) max. 0.001 %
- Acetone (CH<sub>3</sub>COCH<sub>3</sub>) max. 0.001 %
- Ethanol (C<sub>2</sub>H<sub>5</sub>OH) max. 0.1 %
- Formaldehyde (HCHO) max. 0.01 %
- Reducing substances max. 0.00025 %
- Carbonyl compounds (as CO) max. 0.005 %
- Residue on evaporation max. 0.001 %
- Readily carbonisable substances complies
- Substances darkened by H<sub>2</sub>SO<sub>4</sub> complies
- Solubility in water complies
- Colour (APHA) max. 10
- Acidity max. 0.0003 meq/g
- Alkalinity max. 0.0002 meq/g
- UV absorbance at 230 nm max. 0.15
- UV absorbance at 250 nm max. 0.05
- UV absorbance bat 270 nm max. 0.02
- UV absorbance at 290 nm max. 0.01

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1437.1011
2.5 l	Plastic bottle	1437.2511
25 l	Plastic canister	1437.9025
50 l	Metal drum	1437.9050
200 l	Metal drum	1437.9200

## METHANOL DRIED P. A. (MIN. 99.8 %)

### Specification

- Non-volatile substances max. 0.001 % m/m
- Refractive index (20 °C) 1.328 – 1.330
- Water (KF) max. 0.005 % m/m
- Free alkali (as NH<sub>3</sub>) max. 0.0001 %
- Free acids (as HCOOH) max. 0.002 %
- Aluminium (Al) max. 0.5 mg/kg
- Boron (B) max. 0.02 mg/kg
- Barium (Ba) max. 0.1 mg/kg
- Calcium (Ca) max. 0.5 mg/kg
- Cadmium (Cd) max. 0.05 mg/kg
- Cobalt (Co) max. 0.02 mg/kg
- Chromium (Cr) max. 0.02 mg/kg
- Copper (Cu) max. 0.01 mg/kg
- Iron (Fe) max. 0.1 mg/kg
- Magnesium (Mg) max. 0.1 mg/kg
- Manganese (Mn) max. 0.01 mg/kg
- Nickel (Ni) max. 0.02 mg/kg
- Lead (Pb) max. 0.02 mg/kg
- Tin (Sn) max. 0.1 mg/kg
- Zinc (Zn) max. 0.1 mg/kg
- Chloride (Cl) max. 0.5 mg/kg
- Sulphate (SO<sub>4</sub>) max. 1 mg/kg
- Acetaldehyde (C<sub>2</sub>H<sub>4</sub>O) max. 10 mg/kg
- Acetone (CH<sub>3</sub>COCH<sub>3</sub>) max. 0.001 %
- Ethanol (C<sub>2</sub>H<sub>5</sub>OH) max. 0.1 % m/m
- Formaldehyde (HCHO) max. 100 mg/kg
- Substances reducing KMnO<sub>4</sub> (as O) max. 2.5 mg/kg
- Carbonyl compounds (as CO) max. 100 mg/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1459.1000
2.5 l	Glass bottle	1459.2500

## METHANOL GRADIENT GRADE FOR HPLC (MIN. 99.85 %)

### Specification

- Refractive index (20 °C) 1.327 – 1.331
- Water (KF) max. 300 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as HCOOH) max. 10 mg/kg
- Free alkali (as NH<sub>3</sub>) max. 1 mg/kg
- Carbonyl compounds (as CH<sub>3</sub>COCH<sub>3</sub>) max. 20 mg/kg
- HPLC gradient test complies
- HPLC gradient (peak) at 235 nm max. 2 mAU
- HPLC gradient (peak) at 254 nm max. 1 mAU
- UV transmittance at 210 nm min. 30 %
- UV transmittance at 220 nm min. 50 %
- UV transmittance at 235 nm min. 80 %
- UV transmittance at 260 nm min. 98 %
- Ethanol (C<sub>2</sub>H<sub>5</sub>OH) max. 200 mg/kg
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1481.1000
2.5 l	Glass bottle	1481.2500

**METHANOL ULTRAGRADIENT GRADE FOR HPLC, PH. EUR. (MIN. 99.9 %)**

**Specification**

- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.3270 – 1.3300
- Distillation range 64.1 – 65.1 °C
- Acidity max. 0.0003 meq/g
- Alkalinity max. 0.00006 meq/g
- Water (KF) max. 0.02 %
- Residue on evaporation max. 5 ppm
- Carbonyl compounds (as CH<sub>3</sub>COCH<sub>3</sub>) max. 20 ppm
- Ethanol (C<sub>2</sub>H<sub>5</sub>OH) max. 50 ppm
- KMnO<sub>4</sub> reducing compounds (as O) max. 2 ppm
- Fluorescence at 254 nm max. 1 ppb
- Fluorescence at 365 nm max. 1 ppb
- UV transmittance at 210 nm min. 30 %
- UV transmittance at 220 nm min. 55 %
- UV transmittance at 225 nm min. 65 %
- UV transmittance at 235 nm min. 85 %
- UV transmittance at 240 nm min. 90 %
- UV transmittance at 250 nm min. 95 %
- UV transmittance at 260 nm min. 98 %
- HPLC Gradient (peak) at 235 nm max. 2 mAU
- HPLC Gradient (peak) at 254 nm max. 1 mAU
- HPLC Gradient test complies
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	1455.2500

**METHANOL FOR RESIDUE ANALYSIS (MIN. 99.9 %)**

**Specification**

- Refractive index (20 °C) 1.327 – 1.331
- Water (KF) max. 500 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as HCOOH) max. 10 mg/kg
- Free alkali (as NH<sub>3</sub>) max. 1 mg/kg
- GC-ECD: Peak (lindane) (Retention range trichlorobenzene to mirex) max. 3 ng/l
- GC-NPD: Peak (ethylparathion) (Retention range atrazin to coumaphos) max. 3 ng/l
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1448.1000
2.5 l	Glass bottle	1448.2500

**METHANOL FOR LC-MS (MIN. 99.95 %)**

**Specification**

- Refractive index (20 °C) 1.327 – 1.331
- Water (KF) max. 200 mg/kg
- Non-volatile substances max. 2 mg/kg
- Free acid max. 0.0003 meq/g
- Free alkali max. 0.00006 meq/g
- UV transmittance at 210 nm min. 30 %
- UV transmittance at 225 nm min. 65 %
- UV transmittance at 235 nm min. 85 %
- UV transmittance at 250 nm min. 95 %
- UV transmittance from 260 nm min. 98 %
- Fluorescence (as quinine) at 254 nm max. 1 ppb
- Fluorescence (as quinine) at 365 nm max. 1 ppb
- HPLC gradient test complies
- HPLC gradient (peak) at 235 nm max. 2 mAU
- HPLC gradient (peak) at 254 nm max. 1 mAU
- Aluminium (Al) max. 0.000005 %
- Iron (Fe) max. 0.000005 %
- Sodium (Na) max. 0.000005 %
- Calcium (Ca) max. 0.000005 %
- Magnesium (Mg) max. 0.000005 %
- Potassium (K) max. 0.000005 %
- Sensitive impurities (reserpine) max. 100 ppb
- Colour (Hazen) max. 10
- Identity (IR) complies
- Filtered through 0.1 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1428.1000
2.5 l	Glass bottle	1428.2500

**METHANOL FOR UHPLC-MS (MIN. 99.97 %)**

**Specification**

- Assay (GC, on anhydrous basis) 99.97 – 100.0 %
- Water (KF) max. 0.03 % w/w
- Residue on evaporation max. 0.0001 % w/w
- LC-MS suitability test (reserpine) max. 30 ppb
- UV absorption at 210 nm max. 0.40 AU
- UV absorption at 220 nm max. 0.20 AU
- UV absorption at 230 nm max. 0.10 AU
- UV absorption at 254 nm max. 0.02 AU
- Fluorescence (as quinine) at 254 nm max. 0.5 ppb
- Fluorescence (as quinine) at 365 nm max. 0.5 ppb
- Gradient test at 220 nm max. 4 mAU
- Gradient test at 235 nm max. 2 mAU
- Acidity max. 0.0004 meq/g
- Alkalinity max. 0.0001 meq/g
- Aluminium (Al) max. 20 ppb
- Calcium (Ca) max. 50 ppb
- Iron (Fe) max. 20 ppb
- Potassium (K) max. 50 ppb
- Magnesium (Mg) max. 20 ppb
- Sodium (Na) max. 100 ppb
- Lead (Pb) max. 20 ppb
- Filtered through 0.1 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1485.1000
2.5 l	Glass bottle	1485.2500

## METHANOL VLSI (MIN. 99.90 %)

### Specification

- Assay (GC, dry substance) 99.9 – 100.0 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.0003 % w/w
- Water (KF) max. 0.05 % w/w
- Acidity (as CH<sub>3</sub>COOH) max. 0.002 %
- Alkalinity (as NH<sub>3</sub>) max. 0.0002 %
- Chloride (Cl) max. 0.02 ppm
- Phosphate (PO<sub>4</sub>) max. 0.03 ppm
- Sulphate (SO<sub>4</sub>) max. 0.5 ppm
- Silver (Ag) max. 10 ppb
- Aluminium (Al) max. 20 ppb
- Arsenic (As) max. 10 ppb
- Gold (Au) max. 10 ppb
- Boron (B) max. 10 ppb
- Barium (Ba) max. 10 ppb
- Beryllium (Be) max. 10 ppb
- Calcium (Ca) max. 30 ppb
- Cadmium (Cd) max. 10 ppb
- Cobalt (Co) max. 10 ppb
- Chromium (Cr) max. 10 ppb
- Copper (Cu) max. 10 ppb
- Iron (Fe) max. 20 ppb
- Gallium (Ga) max. 20 ppb
- Germanium (Ge) max. 20 ppb
- Potassium (K) max. 30 ppb
- Lithium (Li) max. 20 ppb
- Magnesium (Mg) max. 20 ppb
- Manganese (Mn) max. 10 ppb
- Molybdenum (Mo) max. 20 ppb
- Sodium (Na) max. 30 ppb
- Nickel (Ni) max. 10 ppb
- Lead (Pb) max. 20 ppb
- Antimony (Sb) max. 10 ppb
- Silicon (Si) max. 20 ppb
- Tin (Sn) max. 20 ppb
- Strontium (Sr) max. 20 ppb
- Titanium (Ti) max. 20 ppb
- Vanadium (V) max. 20 ppb
- Zinc (Zn) max. 30 ppb
- Zirconium (Zr) max. 30 ppb
- Particle count >0.5 µm max. 100 P/ml
- Particle count >1.0 µm max. 10 P/ml
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	1408.2500

## METHOXYETHANOL P. A. (MIN. 99.5 %)

- C<sub>3</sub>H<sub>8</sub>O<sub>2</sub>
- M = 76.1 g/mol
- CAS no. 109-86-4
- EC Index no. 603-011-00-4
- EC no. 203-713-7
- Density (20 °C) 0.962 – 0.968 g/ml
- UN-No. 1188
- ADR 3, III

### GHS

- H226 H302+H312+H332 H360FD
- P201 P210 P261 P280 P308+P313



### Specification

- Clear, colourless liquid
- Boiling point 123.5 – 124.5 °C
- Water miscibility complies
- Benzene miscibility complies
- Diethyl ether miscibility complies
- Refractive index (20 °C) 1.4004 – 1.4044
- Water (KF) max. 0.1 %
- Residue on evaporation max. 20 ppm
- Acidity (as CH<sub>3</sub>COOH) max. 30 ppm
- Alkalinity (as NH<sub>3</sub>) max. 0.85 ppm
- Carbonyl compounds (as CO) max. 25 ppm
- Heavy metals (as Pb) max. 2 ppm
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 10 ppm
- Aluminium (Al) max. 0.5 ppm
- Barium (Ba) max. 0.1 ppm
- Calcium (Ca) max. 0.5 ppm
- Cadmium (Cd) max. 0.05 ppm
- Cobalt (Co) max. 0.02 ppm
- Chromium (Cr) max. 0.02 ppm
- Copper (Cu) max. 0.02 ppm
- Iron (Fe) max. 1 ppm
- Magnesium (Mg) max. 0.01 ppm
- Manganese (Mn) max. 0.02 ppm
- Nickel (Ni) max. 0.02 ppm
- Lead (Pb) max. 0.1 ppm
- Tin (Sn) max. 0.1 ppm
- Zinc (Zn) max. 0.1 ppm
- Identity (IR) complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1451.1000
2.5 l	Glass bottle	1451.2500

## 2-METHYLBUTANE PURE (MIN. 95.0 %)

- C<sub>5</sub>H<sub>12</sub>
- M = 72.15 g/mol
- CAS no. 78-78-4
- EC Index no. 601-006-00-1
- EC no. 201-142-8
- Density (20 °C) 0.610 – 0.630 g/ml
- UN-No. 1265
- ADR 3, I

### GHS

- H224 H304 H336 H411 EUH066
- P210 P241 P273 P303+P361+P353 P304+P340 P403+P235 P501



### Specification

- Clear, colourless liquid
- Boiling point 27 – 28.5 °C
- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.3507 – 1.3607
- Water (KF) max. 200 ppm
- Residue on evaporation max. 20 ppm
- Aromatic compounds max. 50 ppm
- Total sulphur (S) max. 2 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1873.1000

**METHYL ETHYL KETONE P. A. (MIN. 99.5 %)**

- C<sub>4</sub>H<sub>8</sub>O
- M = 72.11 g/mol
- CAS no. 78-93-3
- EC Index no. 606-002-00-3
- EC no. 201-159-0
- Density (20 °C) 0.802 – 0.808 g/ml
- UN-No. 1193
- ADR 3, II

**GHS**

- H225 H319 H336 EUH066
- P210 P233 P241 P243 P261 P280  
P303+P361+P353 P305+P351+P338  
P312 P403+P235 P501

**Specification**

- Clear, colourless liquid
- Melting point -86 °C
- Boiling point 79 – 80 °C
- Identity (IR) complies
- Refractive index (20 °C) 1.3784 – 1.3834
- Water (KF) max. 500 mg/kg
- Residue on evaporation max. 10 ppm
- Acidity (as CH<sub>3</sub>COOH) max. 30 ppm
- Aldehydes (as HCHO) max. 20 ppm
- Heavy metals (as Pb) max. 1 ppm
- Substances reducing KMnO<sub>4</sub> max. 2 ppm
- Aluminium (Al) max. 0.5 ppm
- Barium (Ba) max. 0.1 ppm
- Calcium (Ca) max. 0.5 ppm
- Cadmium (Cd) max. 0.05 ppm
- Cobalt (Co) max. 0.02 ppm
- Chromium (Cr) max. 0.02 ppm
- Copper (Cu) max. 0.02 ppm
- Iron (Fe) max. 0.1 ppm
- Magnesium (Mg) max. 0.1 ppm
- Manganese (Mn) max. 0.02 ppm
- Nickel (Ni) max. 0.02 ppm
- Lead (Pb) max. 0.1 ppm
- Tin (Sn) max. 0.1 ppm
- Zinc (Zn) max. 0.1 ppm
- Colour (APHA) max. 10
- Alcohol miscibility complies
- Diethyl ether miscibility complies
- Solubility in water complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1443.1000
1 l	Plastic bottle	1443.1011
2.5 l	Glass bottle	1443.2500

**METHYL ISOBUTYL KETONE P. A. (MIN. 99.5 %)**

- C<sub>6</sub>H<sub>12</sub>O
- M = 100.16 g/mol
- CAS no. 108-10-1
- EC Index no. 606-004-00-4
- EC no. 203-550-1
- Density (20 °C) 0.797 – 0.805 g/ml
- UN-No. 1245
- ADR 3, II

**GHS**

- H225 H319 H332 H335 EUH066
- P210 P233 P241 P243 P261 P280  
P303+P361+P353 P305+P351+P338  
P312 P403+P235 P501

**Specification**

- Clear liquid
- Melting point -80.3 °C
- Boiling point 115.7 – 116.7 °C
- Colour (APHA) max. 10
- Identity (IR) complies
- Alcohol miscibility complies
- Benzene miscibility complies
- Diethyl ether miscibility complies
- Refractive index (20 °C) 1.3930 – 1.3990
- Water (KF) max. 0.05 %
- Residue on evaporation max. 10 ppm
- Acidity max. 0.002 meq/g
- Alkalinity (as NH<sub>3</sub>) max. 10 ppm
- Cadmium (Cd) max. 0.05 ppm
- Copper (Cu) max. 0.1 ppm
- Iron (Fe) max. 0.1 ppm
- Nickel (Ni) max. 0.1 ppm
- Lead (Pb) max. 0.1 ppm
- Zinc (Zn) max. 0.1 ppm
- Acetone (CH<sub>3</sub>COCH<sub>3</sub>) max. 0.1 %
- Mesityl- and isomesityl oxides max. 0.1 %
- 4-Methyl-2-pentanol (C<sub>6</sub>H<sub>14</sub>O) max. 0.1 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1471.1000
2.5 l	Glass bottle	1471.2500

## N-METHYL-2-PYRROLIDONE

- C<sub>5</sub>H<sub>9</sub>NO
- M = 99.13 g/mol
- CAS no. 872-50-4
- EC Index no. 606-021-00-7
- EC no. 212-828-1
- Density (20 °C) 1.026 – 1.032 g/ml

### GHS

- H315 H319 H335 H360D
- P201 P261 P280 P308+P313 P403+P233



### Specification

- Clear, colourless liquid
- Melting point -24 °C
- Boiling point 202 – 205 °C

## N-METHYL-2-PYRROLIDONE FOR SYNTHESIS (MIN. 99.5 %)

### Specification

- Identity complies
- Refractive index (20 °C) 1.4670 – 1.4710
- Residue on evaporation max. 50 ppm
- Colour (APHA) max. 50
- Water (KF) max. 0.1 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1464.1000
2.5 l	Glass bottle	1464.2500

## N-METHYL-2-PYRROLIDONE VLSI (MIN. 99.8 %)

### Specification

- Assay (GC, dry substance) 99.8 – 100.0 %
- Colour (APHA) max. 15
- Residue on evaporation max. 0.0010 % w/w
- Water (KF) max. 0.03 % w/w
- Alkalinity (as CH<sub>3</sub>NH<sub>2</sub>) max. 0.004 %
- Chloride (Cl) max. 0.05 ppm
- Phosphate (PO<sub>4</sub>) max. 1 ppm
- Dilution test complies
- Silver (Ag) max. 50 ppb
- Aluminium (Al) max. 80 ppb
- Arsenic (As) max. 50 ppb
- Gold (Au) max. 50 ppb
- Boron (B) max. 50 ppb
- Barium (Ba) max. 50 ppb
- Beryllium (Be) max. 50 ppb
- Calcium (Ca) max. 50 ppb
- Cadmium (Cd) max. 50 ppb
- Cobalt (Co) max. 50 ppb
- Chromium (Cr) max. 50 ppb
- Copper (Cu) max. 50 ppb
- Iron (Fe) max. 50 ppb
- Gallium (Ga) max. 50 ppb
- Niobium (Nb) max. 50 ppb
- Potassium (K) max. 50 ppb
- Lithium (Li) max. 50 ppb
- Magnesium (Mg) max. 50 ppb
- Manganese (Mn) max. 50 ppb
- Molybdenum (Mo) max. 50 ppb
- Sodium (Na) max. 50 ppb
- Nickel (Ni) max. 50 ppb
- Lead (Pb) max. 50 ppb
- Antimony (Sb) max. 50 ppb
- Silicon (Si) max. 50 ppb
- Tin (Sn) max. 50 ppb
- Strontium (Sr) max. 50 ppb
- Titanium (Ti) max. 50 ppb
- Vanadium (V) max. 50 ppb
- Zinc (Zn) max. 50 ppb
- Particle count >0.5 µm max. 80 P/ml
- Particle count >1.0 µm max. 8 P/ml
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	1415.5000

## 2-METHYLTETRAHYDROFURAN

- C<sub>5</sub>H<sub>10</sub>O
- M = 86.14 g/mol
- CAS no. 96-47-9
- EC no. 202-507-4
- Density (20 °C) 0.855 g/cm<sup>3</sup>
- UN-No. 2536
- ADR 3, II

### GHS

- H225 H302 H318 H335 EUH019
- P210 P241 P280 P303+P361+P353 P304+P340 P305+P351+P338 P403+P235 P501



### Specification

- Colourless liquid
- Melting point -136 °C
- Boiling point 80.2 °C

## 2-METHYLTETRAHYDROFURAN FOR SYNTHESIS, PURE (MIN. 99.9 % (STAB.))

### Specification

- Refractive index (20 °C) 1.404 – 1.408
- Water (KF) max. 300 mg/kg
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 100 mg/kg
- Stabilized with ionol 150 – 400 mg/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1483.1000
2.5 l	Glass bottle	1483.2500
5 l	Plastic canister	1483.5000



**2-METHYLTETRAHYDROFURAN FOR HPLC, ISOCRATIC (MIN. 99.5 % (UNSTAB.))**

**Specification**

- Identity complies
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.404 – 1.408
- Water (KF) max. 200 mg/kg
- Non-volatile substances max. 5 mg/kg
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 300 mg/kg
- UV transmittance at 240 nm min. 30 %
- UV transmittance at 250 nm min. 50 %
- UV transmittance at 260 nm min. 70 %
- UV transmittance at 280 nm min. 90 %
- UV transmittance from 310 nm min. 98 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1474.1000
2.5 l	Glass bottle	1474.2500

**MIXTURE ACETIC ACID/CHLOROFORM 3 : 2 (CHCl<sub>3</sub> 60 % CH<sub>3</sub>COOH, 40 %)**

- UN-No. 3286
  - ADR 3 (6.1, 8), II
- GHS**
- H226 H310 H314 H351 H361d H372
  - P210 P280 P303+P361+P353 P305+P351+P338 P310 P405 P501



**Specification**

- Colourless liquid

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2409.2500

**MIXTURE ACETIC ACID/TOLUENE/ACETONE 3 : 6 : 1 (30 % V/V CH<sub>3</sub>COOH, 60 % V/V C<sub>7</sub>H<sub>8</sub>, 10 % V/V CH<sub>3</sub>COCH<sub>3</sub>)**

- UN-No. 2924
  - ADR 3 (8), II
- GHS**
- H225 H304 H314 H336 H361d H373
  - P210 P301+P310 P303+P361+P353 P305+P351+P338 P405 P501



Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	2205.2510

**MIXTURE ACETONE/HYDROCHLORIC ACID 4 % 95 : 5**

- Density 0.79 kg/l
  - UN-No. 1090
  - ADR 3, II
- GHS**
- H225 H319 H336 EUH066
  - P210 P261 P280 P312 P403+P233



**Specification**

- Water 4.5 – 5.5 %
- Acidity (as HCl) 0.18 – 0.22 %

Quantity	Packaging material	Art. no.
5 l	Plastic canister	2630.5000



More information about Green Solvents → see page 355

## MIXTURE ETHYL ACETATE/CYCLOHEXANE 50 : 50 (% V/V) FOR RESIDUE ANALYSIS

- UN-No. 1993
- ADR 3, II

### GHS

- H225 H304 H315 H319 H336 H410 EUH66
- P210 P261 P273 P280 P301+P310+P331 P312 P501



### Specification

- Ethyl acetate (C<sub>4</sub>H<sub>8</sub>O<sub>2</sub>) 49.5 – 50.5 % v/v
- Cyclohexane (C<sub>6</sub>H<sub>12</sub>) 49.5 – 50.5 % v/v
- GC-ECD: Peak (lindane) max. 3 ng/l

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	697.2500

## MIXTURE METHANOL/WATER 50 : 50 (% W/W)

- UN-No. 1230
- ADR 3 (6.1), II

### GHS

- H225 H301+H311+H331 H370
- P210 P241 P260 P301+P310 P303+P361+P353 P403+P235 P405 P501



### Specification

- Clear, colourless liquid
- Methanol (CH<sub>3</sub>OH) 49.5 – 50.5 % w/w
- Water 49.5 – 50.5 % w/w

Quantity	Packaging material	Art. no.
25 l	Plastic canister	1480.9025

## MOPS (3-MORPHOLINOPROPANESULFONIC ACID) (MIN. 99.5 %)

- C<sub>7</sub>H<sub>15</sub>NO<sub>4</sub>S
- CAS no. 1132-61-2

- EC no. 214-478-5

### GHS

- H319 H335
- P261 P305+P351+P338



### Specification

- Melting point ~280 °C
- Assay (titr.) min. 99.5 %
- pH (0.1 M H<sub>2</sub>O) 3.5 – 4.5
- Identity (IR) complies
- Sodium (Na) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Absorption at 260 nm (1 cm, 0.1 M in H<sub>2</sub>O) max. 0.05 AU
- Absorption at 280 nm (1 cm, 0.1 M in H<sub>2</sub>O) max. 0.05 AU
- Water (KF) max. 0.2 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8773.0500
1 kg	Plastic bottle	8773.1000

**NICKEL(II) CHLORIDE HEXAHYDRATE P. A. (MIN. 97.0 %)**

- $\text{NiCl}_2 \times 6 \text{H}_2\text{O}$
- M = 237.70 g/mol
- CAS no. 7791-20-0
- EC no. 231-743-0
- Density 1.92 g/cm<sup>3</sup>
- UN-No. 3288
- ADR 6.1, III

**GHS**

- H301+H331 H315 H317 H334 H341 H350 H360 H373 H410
- P201 P273 P302+P352 P304+P340 P308+P313 P309 P310 P501

**Specification**

- Green solid
- Melting point 140 °C
- Boiling point 1001 °C
- Calcium (Ca) max. 0.005 %
- Cadmium (Cd) max. 0.001 %
- Cobalt (Co) max. 0.002 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.002 %
- Magnesium (Mg) max. 0.001 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1344.1000

**NICKEL(II) SULPHATE HEXAHYDRATE P. A., ACS (MIN. 99.0 %)**

- $\text{NiSO}_4 \times 6 \text{H}_2\text{O}$
- M = 262.86 g/mol
- CAS no. 10101-97-0
- EC Index no. 028-009-00-5
- EC no. 232-104-9
- Density 2.07 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

**GHS**

- H302 H315 H317 H334 H341 H350 H360 H372 H410
- P201 P273 P280 P302+P352 P308+P313 P342+P311 P501

**Specification**

- Green solid
- Melting point 53 °C
- Calcium (Ca) max. 0.005 %
- Cobalt (Co) max. 0.002 %
- Copper (Cu) max. 0.002 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Manganese (Mn) max. 0.0005 %
- Sodium (Na) max. 0.01 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.002 %
- Chloride (Cl) max. 0.001 %
- Nitrogen (N) max. 0.001 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1365.1000

**NINHYDRIN P. A., ACS (MIN. 99.0 %)**

- $\text{C}_9\text{H}_6\text{O}_4$
- M = 178.15 g/mol
- CAS no. 485-47-2
- EC no. 207-618-1

**GHS**

- H302 H315 H319 H335
- P264 P271 P280 P304+P340 P305+P351+P338 P330

**Specification**

- Yellow powder
- Identity complies
- Ident. and melting point complies
- Amino acid sensitivity complies
- Solubility complies

Quantity	Packaging material	Art. no.
25 g	Glass bottle	1338.0025

## NITRIC ACID

- $\text{HNO}_3$
- $M = 63.01 \text{ g/mol}$
- CAS no. 7697-37-2
- EC Index no. 007-004-00-1
- EC no. 231-714-2

- Density 1.40 g/ml
- UN-No. 2031
- ADR 8 (5.1), I

### GHS

- H272 H290 H314 H331 EUH071
- P210 P220 P260 P264 P280  
P301+P330+P331 P303+P361+P353  
P304+P340 P305+P351+P338 P310  
P405 P501



### Specification

- Colourless liquid

- Melting point  $-32 \text{ }^\circ\text{C}$

- Boiling point  $122 \text{ }^\circ\text{C}$

## NITRIC ACID PURISS. (MIN. 65.0 %)

### Specification

- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.0005 %

- Iron (Fe) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %

- Chloride (Cl) max. 0.0001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.0002 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	827.1011
2.5 l	Plastic bottle	827.2511

## NITRIC ACID P. A. (MIN. 65.0 %)

### Specification

- Residue on ignition max. 0.0005 %
- Arsenic (As) max. 0.000001 %
- Calcium (Ca) max. 0.0001 %
- Cadmium (Cd) max. 0.000001 %

- Copper (Cu) max. 0.000005 %
- Iron (Fe) max. 0.00002 %
- Lead (Pb) max. 0.000005 %
- Zinc (Zn) max. 0.00001 %

- Chloride (Cl) max. 0.00005 %
- Phosphate ( $\text{PO}_4$ ) max. 0.00005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.0001 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	865.1000
2.5 l	Glass bottle	865.2500



**NITRIC ACID SUPERPURE FOR TRACE ANALYSIS (67.0 – 69.0 % W/W)**

**Specification**

- Colour (APHA) max. 10
- Chloride (Cl) max. 0.2 ppm
- Total phosphorus (P) max. 0.01 ppm
- Total sulphur (S) max. 0.3 ppm
- Aluminium (Al) max. 1 ppb
- Antimony (Sb) max. 0.5 ppb
- Arsenic (As) max. 0.5 ppb
- Barium (Ba) max. 0.1 ppb
- Beryllium (Be) max. 0.1 ppb
- Bismuth (Bi) max. 0.1 ppb
- Boron (B) max. 1 ppb
- Cadmium (Cd) max. 0.5 ppb
- Calcium (Ca) max. 1 ppb
- Cerium (Ce) max. 0.1 ppb
- Caesium (Cs) max. 0.1 ppb
- Chromium (Cr) max. 1 ppb
- Cobalt (Co) 0.5 ppb
- Copper (Cu) max. 0.5 ppb
- Dysprosium (Dy) max. 0.1 ppb
- Erbium (Er) max. 0.1 ppb
- Europium (Eu) 0.1 ppb
- Gadolinium (Gd) max. 0.1 ppb
- Gallium (Ga) max. 0.1 ppb
- Germanium (Ge) max. 0.1 ppb
- Gold (Au) max. 0.1 ppb
- Hafnium (Hf) max. 0.1 ppb
- Holmium (Ho) max. 0.1 ppb
- Indium (In) max. 0.1 ppb
- Iron (Fe) max. 1 ppb
- Lanthanum (La) max. 0.1 ppb
- Lead (Pb) max. 0.1 ppb
- Lithium (Li) max. 0.1 ppb
- Lutetium (Lu) max. 0.1 ppb
- Magnesium (Mg) max. 1 ppb
- Manganese (Mn) max. 0.1 ppb
- Mercury (Hg) max. 0.1 ppb
- Molybdenum (Mo) max. 0.1 ppb
- Neodymium (Nd) max. 0.1 ppb
- Nickel (Ni) max. 0.5 ppb
- Niobium (Nb) max. 0.1 ppb
- Palladium (Pd) max. 0.5 ppb
- Platinum (Pt) max. 0.5 ppb
- Potassium (K) max. 1 ppb
- Praseodymium (Pr) max. 0.1 ppb
- Rhenium (Re) max. 0.1 ppb
- Rhodium (Rh) max. 0.5 ppb
- Rubidium (Rb) max. 0.1 ppb
- Ruthenium (Ru) max. 0.5 ppb
- Samarium (Sm) max. 0.1 ppb
- Scandium (Sc) max. 0.1 ppb
- Selenium (Se) max. 1 ppb
- Silver (Ag) max. 0.1 ppb
- Sodium (Na) max. 1 ppb
- Strontium (Sr) max. 0.1 ppb
- Tellurium (Te) max. 0.1 ppb
- Terbium (Tb) max. 0.1 ppb
- Thallium (Tl) max. 0.1 ppb
- Thorium (Th) max. 0.1 ppb
- Thulium (Tm) max. 0.1 ppb
- Tin (Sn) max. 0.5 ppb
- Titanium (Ti) max. 0.5 ppb
- Tungsten (W) max. 0.1 ppb
- Uranium (U) max. 0.1 ppb
- Vanadium (V) max. 0.5 ppb
- Ytterbium (Yb) max. 0.1 ppb
- Yttrium (Y) max. 0.1 ppb
- Zinc (Zn) max. 0.5 ppb
- Zirconium (Zr) max. 0.1 ppb

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	838.1011
2.5 l	Plastic bottle	838.2500

**OCTANE-1-SULFONIC ACID SODIUM SALT (MIN. 98.0 %)**

- $\text{CH}_3(\text{CH}_2)_7\text{SO}_3\text{Na}$
- M = 216.28 g/mol
- CAS no. 5324-84-5
- EC no. 226-195-4

**Specification**

- White, crystalline powder
- Identity complies
- Water (KF) max. 2.0 %
- UV absorption at 200 nm (0.25 M) max. 0.10 AU
- UV absorption at 210 nm (0.25 M) max. 0.05 AU
- UV absorption at 220 nm (0.25 M) max. 0.04 AU
- UV absorption at 230 nm (0.25 M) max. 0.03 AU
- UV absorption at 240 nm (0.25 M) max. 0.01 AU
- UV absorption at 250 nm (0.25 M) max. 0.01 AU
- UV absorption at 260 nm (0.25 M) max. 0.01 AU

Quantity	Packaging material	Art. no.
25 g	Glass bottle	1205.0025

**OXALIC ACID SOLUTION 0.05 MOL/L (0.1 N)**

- 6.31 g  $\text{C}_2\text{H}_2\text{O}_4 \times 2 \text{H}_2\text{O} / \text{l H}_2\text{O} = 0.1 \text{ N}$   
( $\pm 0.0002 / 20 \text{ }^\circ\text{C}$ )

Quantity	Packaging material	Art. no.
5 l	Plastic canister	1230.5000

## PARAFFIN FOR HISTOLOGY

- CAS no. 8002-74-2
- EC no. 232-315-6

- Density 0.764 g/cm<sup>3</sup>

### GHS

- EUH018

### Specification

- White pastilles
- Melting point 50 – 52 °C
- Boiling point >100 °C

Quantity	Packaging material	Art. no.
2 kg	Paper bag	1168.2000

## N-PENTANE

- CH<sub>3</sub>(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>
- M = 72.15 g/mol
- CAS no. 109-66-0
- EC Index no. 601-006-00-1
- EC no. 203-692-4

- UN-No. 1265
- ADR 3, II

### GHS

- H225 H304 H336 H411 EUH066
- P210 P241 P243 P261 P271 P273
- P301+P310 P303+P361+P353
- P304+P340 P312 P331 P403+P233 P501



### Specification

- Clear, colourless liquid
- Melting point -129.7 °C
- Boiling point 36 °C

### N-PENTANE (MIN. 94.0 %)

- Density (15 °C) 0.625 – 0.638 g/ml

### Specification

- Colour (Saybolt) min. +30
- Refractive index (20 °C) 1.357 – 1.359

Quantity	Packaging material	Art. no.
125 kg	Metal drum	1166.9125

### N-PENTANE P. A. (MIN. 99.0 %)

- Density 0.63 g/ml

### Specification

- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Free acid max. 0.0005 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.0000002 %
- Copper (Cu) max. 0.0000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Sulphur (S) max. 0.005 %
- Isopentane (C<sub>5</sub>H<sub>12</sub>) max. 0.7 %
- Cyclopentane (C<sub>5</sub>H<sub>10</sub>) max. 0.3 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1147.1000
2.5 l	Glass bottle	1147.2500

## PENTANE-1-SULFONIC ACID SODIUM SALT (MIN. 98.0 %)

- CH<sub>3</sub>(CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub>Na
- M = 174.19 g/mol

- CAS no. 22767-49-3

- EC no. 245-208-4

### Specification

- White, crystalline powder
- Water (KF) max. 2.0 %
- UV absorption at 200 nm (0.25 M) max. 0.10 AU
- UV absorption at 210 nm (0.25 M) max. 0.05 AU
- UV absorption at 220 nm (0.25 M) max. 0.04 AU
- UV absorption at 230 nm (0.25 M) max. 0.03 AU
- UV absorption at 240 nm (0.25 M) max. 0.01 AU
- UV absorption at 250 nm (0.25 M) max. 0.01 AU
- UV absorption at 260 nm (0.25 M) max. 0.01 AU

Quantity	Packaging material	Art. no.
25 g	Glass bottle	1105.0025

### PEPSIN LIQUID

- CAS no. 9001-75-6
- EC Index no. 647-008-00-6

- EC no. 232-629-3

#### GHS

- H315 H319 H334 H335
- P261 P285 P304+P341 P342+P311 P403+P233 P405 P501



#### Specification

- Viscous, brownish liquid, hygroscopic
- Protein activity 600.0 – 800.0 U/ml
- pH (20 °C) 3.5 – 4.5

Quantity	Packaging material	Art. no.
5 l	Plastic canister	8483.5000

### PERCHLORIC ACID IN ANHYDROUS ACETIC ACID 0.1 MOL/L (0.1 N)

- UN-No. 2920
- ADR 8 (3), II

#### GHS

- H226 H314
- P210 P241 P243 P260 P280 P301+P330+P331 P303+P361+P533 P305+P351+P338 P310 P403+P235 P501



#### Specification

- Colourless liquid
- Assay (potentiometric) 0.0998 – 0.1002 N

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1171.1000

### PERIODIC ACID P. A. (MIN. 99.0 %)

- H<sub>5</sub>IO<sub>6</sub>
- M = 227.94 g/mol
- CAS no. 10450-60-9
- EC no. 233-937-0

- Density 1.4 g/cm<sup>3</sup>
- UN-No. 3084
- ADR 5.1, II

#### GHS

- H272 H314
- P221 P264 P301+P330+P331 P303+P361+P533 P304+P340 P305+P351+P338 P501



#### Specification

- White-yellowish crystalline solid
- Melting point 122 °C
- Assay (iodometric) max. 99.0 %
- Identity complies
- Appearance of 5 % solution complies
- Iodic acid (HIO<sub>3</sub>) max. 1 %
- Iodide (I) max. 10 ppm
- Chloride, bromide, chlorate and bromate (as Cl) max. 200 ppm
- Nitrate (NO<sub>3</sub>) max. 100 ppm
- Sulphated ash max. 0.05 %
- Iron (Fe) max. 30 ppm

Quantity	Packaging material	Art. no.
25 g	Glass bottle	1107.0025
100 g	Glass bottle	1107.0100

## PETROLEUM BENZINE

- CAS no. 64742-49-0
- EC Index no. 649-328-00-1
- EC no. 265-151-9
- UN-No. 1268
- ADR 3, II

### GHS

- H225 H304 H336 H411 EUH066
- P210 P241 P243 P261 P271 P273 P280 P301+P310 P303+P361+P353 P304+P340 P403+P233 P501



### Specification

- Colourless liquid

## PETROLEUM BENZINE PURISS., ACS (BOILING RANGE 40 – 60 °C)

- Density 0.653 g/ml

### Specification

- Melting point -100 °C
- Boiling point 40 – 60 °C
- Appearance of solution complies
- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 0.001 %
- Sulphur (S) max. 0.005 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1176.1000
5 l	Aluminium can	1176.5000
25 l	Metal drum	1176.9025

## PETROLEUM BENZINE P. A., ISO, ACS (BOILING RANGE 40 – 60 °C)

- Density (20 °C) 0.640 – 0.655 g/ml

### Specification

- Melting point max. -100 °C
- Boiling point 40 – 60 °C
- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Free acid max. 0.002 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.000002 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 0.01 %
- Iodine number max. 0.3
- Sulphur (S) max. 0.005 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.001 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1194.1000
2.5 l	Glass bottle	1194.2500
5 l	Aluminium can	1194.5000
25 l	Metal drum	1194.9025

## PETROLEUM BENZINE MANUFACTURED ACC. DAB 2010 (BOILING RANGE 40 – 65 °C)

### Specification

- Boiling point 40 – 60 °C
- Non-volatile substances max. 0.001 % m/v
- Sulphur compounds complies
- n-Hexane (C<sub>6</sub>H<sub>14</sub>) complies
- Tetraethyllead (C<sub>8</sub>H<sub>20</sub>Pb) complies
- Acidic or alkaline substances complies
- Conduct towards sulphuric acid complies
- Relative density 0.642 – 0.656

Quantity	Packaging material	Art. no.
25 l	Metal drum	1195.9025



**PETROLEUM BENZINE FOR RESIDUE ANALYSIS (BOILING RANGE 35 – 60 °C)**

**Specification**

- Boiling point 35 – 60 °C
- Refractive index (20 °C) 1.355 – 1.359
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 2 mg/kg
- GC-ECD: Peak (lindane) (Retention range trichlorobenzene to mirex) max. 3 ng/l
- Total sulphur (S) max. 10 ppm
- Colour (Hazen) max. 10

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	1152.2500

**PETROLEUM BENZINE FOR PESTICIDE ANALYSIS (BOILING RANGE 40 – 65 °C)**

**Specification**

- Boiling point 40 – 65 °C
- Water (KF) max. 100 mg/kg
- Non-volatile substances max. 2 mg/kg
- GC-ECD: Peak (lindane) (Retention range trichlorobenzene to mirex) max. 3 ng/l
- GC-NPD: Peak (ethylparathion) (Retention range atrazin to coumaphos) max. 3 ng/l
- Colour (Hazen) max. 10
- Density (d 15/4) 0.640 – 0.655
- GC chromatogramm complies

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	1145.2500

**PETROLEUM BENZINE P.A. (BOILING RANGE 60 – 80 °C)**

- Density (20 °C) 0.660 – 0.690 g/ml

**Specification**

- Boiling point 60 – 80 °C
- Colour (APHA) max. 10
- Identity complies
- Water (KF) max. 100 ppm
- Residue on evaporation max. 10 ppm
- Acidity (as CH<sub>3</sub>COOH) max. 5 ppm
- Substances reducing KMnO<sub>4</sub> max. 20 ppm
- Total sulphur (S) max. 50 ppm
- Ready carbonizable substances complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1185.1000
2.5 l	Glass bottle	1185.2500

**PETROLEUM BENZINE (BOILING RANGE 80 – 110 °C)**

- Density 0.689 – 0.735 g/ml

**Specification**

- Boiling point 80 – 110 °C
- Refractive index (25°C) 1.3870 – 1.4035
- Colour (Hazen) max. 10
- Refractive index (20°C) 1.3890 – 1.4055

Quantity	Packaging material	Art. no.
2.5 l	Plastic canister	1186.2500
25 l	Metal drum	1186.9025



## PHENOL P. A., ACS, PH. EUR. (MIN. 99.5 %)

- $C_6H_5OH$
- M = 94.11 g/mol
- CAS no. 108-95-2
- EC Index no. 604-001-00-2
- EC no. 203-632-7
- Density 1.06 g/cm<sup>3</sup>
- UN-No. 1671
- ADR 6.1, II

### GHS

- H301+H311+H331 H314 H341 H373
- P201 P260 P280 P301+P330+P331 P303+P361+P353 P305+P351+P338 P310 P361+P364 P403+P233



### Specification

- Colourless powder
- Melting point 40 °C
- Boiling point 182 °C
- Appearance of solution complies
- Chloride (Cl) max. 0.0005 %
- Iron (Fe) max. 0.0001 %
- o-Cresol ( $C_7H_8O$ ) max. 0.05 %
- m-Cresol ( $C_7H_8O$ ) max. 0.05 %
- p-Cresol ( $C_7H_8O$ ) max. 0.05 %
- Non-volatile substances max. 0.01 %
- Water max. 0.2 %
- Residue on evaporation max. 0.05 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1109.1000

## ORTHO-PHOSPHORIC ACID

- $H_3PO_4$
- M = 98.00 g/mol
- CAS no. 7664-38-2
- EC Index no. 015-011-00-6
- EC no. 231-633-2
- UN-No. 1805
- ADR 8, III

### GHS

- H314
- P260 P280 P301+P330+P331 P303+P361+P353 P305+P351+P338 P310 P405 P501



### Specification

- Colourless liquid
- Melting point ~-21 °C
- Boiling point ~158 °C

## ORTHO-PHOSPHORIC ACID PURISS. (MIN. 60.0 %)

- Density 1.426 g/ml

### Specification

- Assay (titr.) min. 60.0 %

Quantity	Packaging material	Art. no.
5 l	Plastic canister	DG10185.5000

## ORTHO-PHOSPHORIC ACID PURISS., DAB, PH. EUR., BP, PH. FRANÇ., NF, FCC (MIN. 85.0 %)

- Density 1.58 g/ml

### Specification

- Chloride (Cl) max. 0.0005 %
- Fluoride (F) max. 0.0005 %
- Nitrate ( $NO_3$ ) max. 0.0005 %
- Phosphonic acid ( $H_3PO_3$ ) max. 0.003 %
- Sulphate ( $SO_4$ ) max. 0.005%
- Arsenic (As) max. 0.0002 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.001 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.001 %

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	1198.2511
25 l	Plastic canister	1198.9025

**ORTHO-PHOSPHORIC ACID P. A., PH. EUR., BP (MIN. 84.0 % W/W)****Specification**

- Assay 84.0 – 90.0 % w/w
- Identity complies
- Appearance of the solution complies
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %
- Hypophosphoric acid (H<sub>3</sub>PO<sub>2</sub>) and phosphonic acid (H<sub>3</sub>PO<sub>3</sub>) complies
- Heavy metals (as Pb) max. 0.001 %
- Substances precipitated by ammonia complies
- Arsenic (As) max. 0.0002 %
- Iron (Fe) max. 0.005 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1156.1000
2.5 l	Glass bottle	1156.2500

**POTASSIUM ACETATE PURISS., PH. EUR., BP (MIN. 99.0 %)**

- KCH<sub>3</sub>COO
- M = 98.14 g/mol
- CAS no. 127-08-2
- EC no. 204-822-2
- Density 1.57 g/cm<sup>3</sup>

**Specification**

- Colourless to white solid
- Melting point 292 °C
- Iron (Fe) max. 0.001 %
- Mercury (Hg) max. 0.0001 %
- Sodium (Na) max. 0.5 %
- Lead (Pb) max. 0.0004 %
- Acetic acid (CH<sub>3</sub>COOH) max. 0.5 %
- Chloride (Cl) max. 0.01 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Heavy metals (as Pb) max. 0.0004 %
- Aluminium (Al) max. 0.0001 %
- Arsenic (As) max. 0.0002 %
- Water max. 3 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1613.1000

**POTASSIUM BROMATE P. A., ACS, PH. EUR., ISO (MIN. 99.8 %)**

- KBrO<sub>3</sub>
- M = 167.01 g/mol
- CAS no. 7758-01-2
- EC Index no. 035-003-00-6
- EC no. 231-829-8
- Density 3.25 g/cm<sup>3</sup>
- UN-No. 1484
- ADR 5.1, II

**GHS**

- H271 H301 H350
- P201 P309 P310

**Specification**

- Colourless to white solid
- Melting point 350 °C
- Free acid max. 0.005 %
- Free alkali max. 0.003 %
- Iron (Fe) max. 0.0005 %
- Sodium (Na) max. 0.01 %
- Heavy metals (as Pb) max. 0.0005 %
- Bromide (Br) max. 0.05 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.001 %
- pH (5 %, 25 °C) 5 – 9
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1669.0100

**POTASSIUM BROMATE SOLUTION 0.033 MOL/L ACC. PH. EUR. CHAPTER 4.2.2**

- traceable to NIST
- GHS
- H350
- P201 P202 P280 P308+P313 P405 P501

**Specification**

- Colourless liquid
- Assay 0.03284 – 0.03317 M

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1624.1000

## POTASSIUM CHLORIDE P. A., ISO, PH. EUR. (MIN. 99.5 %)

- KCl
- M = 74.55 g/mol
- CAS no. 7447-40-7
- EC no. 231-211-8
- Density 1.98 g/cm<sup>3</sup>

### Specification

- White powder
- Melting point 773 °C
- Boiling point 1413 °C
- Barium (Ba) max. 0.001 %
- Calcium (Ca) max. 0.001 %
- Iron (Fe) max. 0.0002 %
- Magnesium (Mg) max. 0.0005 %
- Sodium (Na) max. 0.02 %
- Heavy metals (as Pb) max. 0.0005 %
- Bromide (Br) max. 0.01 %
- Iodide (I) max. 0.002 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- Nitrogen (N) max. 0.001 %
- Loss on drying max. 0.2 %
- pH (5 % solution) 5.0 – 8.0

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1632.0500
1 kg	Plastic bottle	1632.1000

## POTASSIUM CHROMATE SOLUTION 50 G/L (5 % IN WATER)

- 50 g K<sub>2</sub>CrO<sub>4</sub>/l H<sub>2</sub>O
- M = 194.21 g/mol
- Density 1.05 g/ml
- UN-No. 3287
- ADR 6.1, II

### GHS

- H315 H317 H335 H340 H350i H410
- P201 P273 P280 P302+P352  
P305+P351+P338 P308+P313 P391 P501



### Specification

- Orange liquid
- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1604.1000

## POTASSIUM DICHROMATE SOLUTION FOR COD DETERMINATION 0.02 MOL/L

- 5.884 g K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>/l H<sub>2</sub>O = 0.12 N  
(±0.00024/20 °C)
- M = 294.19 g/mol
- Density 1.00 g/ml

### GHS

- H300 H312 H340 H350 H360FD H373  
H412
- P201 P260 P280 P301+P310 P308 P312  
P313 P314 P321 P362+P364 P501



### Specification

- Orange liquid
- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1602.1000

**POTASSIUM DIHYDROGEN PHOSPHATE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)**

- $\text{KH}_2\text{PO}_4$
- M = 136.09 g/mol
- CAS no. 7778-77-0
- EC no. 231-913-4
- Density 2.34 g/cm<sup>3</sup>

**Specification**

- White powder
- Melting point ~253 °C (decomposition)
- Loss on drying (110 °C) max. 0.1 %
- Arsenic (As) max. 0.00005 %
- Iron (Fe) max. 0.001 %
- Sodium (Na) max. 0.005 %
- Chloride (Cl) max. 0.0005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.003 %
- Nitrogen (N) max. 0.001 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0003 %
- Chromium (Cr) max. 0.0002 %
- Nickel (Ni) max. 0.0001 %
- Heavy metals (as Pb) max. 0.001 %
- pH (5 %, 25 °C) 4.2 – 4.5
- Insoluble matter max. 0.01 %
- Residual solvents (Ph. Eur./ICH) not existent
- Identity complies
- Appearance of solution complies
- Reducing substances complies

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1648.0250
1 kg	Plastic bottle	1648.1000
5 kg	Plastic bottle	1648.5000

**POTASSIUM FLUORIDE P. A. (MIN. 99.0 %)**

- KF
- M = 58.10 g/mol
- CAS no. 7789-23-3
- EC Index no. 009-005-00-2
- EC no. 232-151-5
- Density 2.48 g/cm<sup>3</sup>
- UN-No. 1812
- ADR 6.1, III

**GHS**

- H301+H311+H331
- P280 P302+P352 P304+P340 P308+P311 P501



**Specification**

- Free acid max. 0.01 %
- Free alkali max. 0.01 %
- Cadmium (Cd) max. 0.0005 %
- Cobalt (Co) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Nickel (Ni) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.005 %
- Potassium hexafluorosilicate ( $\text{K}_2[\text{SiF}_6]$ ) max. 0.1 %
- Sulphate ( $\text{SO}_4$ ) max. 0.02 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1630.1000
20 kg	Fiber drum	1630.9020



## POTASSIUM HEXACYANOFERRATE(III) P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)

- $K_3[Fe(CN)_6]$
- M = 329.25 g/mol
- CAS no. 13746-66-2
- EC no. 237-323-3
- Density 1.85 g/cm<sup>3</sup>

### Specification

- Melting point 300 °C (decomposition)
- Calcium (Ca) max. 0.0005 %
- Cadmium (Cd) max. 0.0005 %
- Cobalt (Co) max. 0.005 %
- Copper (Cu) max. 0.001 %
- Sodium (Na) max. 0.02 %
- Nickel (Ni) max. 0.001 %
- Lead (Pb) max. 0.002 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.005 %
- Potassium hexacyanoferrate(II) ( $K_4[Fe(CN)_6]$ ) max. 0.02 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Insoluble matter in water max. 0.005 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1610.0250
1 kg	Plastic bottle	1610.1000

## POTASSIUM HEXACYANOFERRATE(II) TRIHYDRATE P. A., ISO (MIN. 99.0 %)

- $K_4[Fe(CN)_6] \times 3 H_2O$
- M = 422.39 g/mol
- CAS no. 14459-95-1
- EC no. 237-722-2
- Density 1.85 g/cm<sup>3</sup>

### Specification

- Melting point 70 °C (decomposition)
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.002 %
- Sodium (Na) max. 0.01 %
- Carbonate (CO<sub>3</sub>) max. 0.002 %
- Lead (Pb) max. 0.002 %
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Insoluble matter in water max. 0.005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1609.0100
500 g	Plastic bottle	1609.0500

## POTASSIUM HYDROGEN CARBONATE P. A., PH. EUR. (MIN. 99.5 %)

- KHCO<sub>3</sub>
- M = 100.12 g/mol
- CAS no. 298-14-6
- EC no. 206-059-0
- Density 2.17 g/cm<sup>3</sup>

### Specification

- Colourless to white solid
- Melting point 292 °C
- Aluminium (Al) max. 0.0005 %
- Calcium (Ca) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Sodium (Na) max. 0.02 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Silicate (SiO<sub>2</sub>) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.001 %
- Nitrogen (N) max. 0.001 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1622.0500

## DI-POTASSIUM HYDROGEN PHOSPHATE ANHYDROUS P. A., PH. EUR. (MIN. 99.0 %)

- K<sub>2</sub>HPO<sub>4</sub>
- M = 174.18 g/mol
- CAS no. 7758-11-4
- EC no. 231-834-5
- Density 2.44 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Loss on drying max. 1.0 %
- Nitrogen (N) max. 0.001 %
- Sodium (Na) max. 0.5 %
- Chloride (Cl) max. 0.003 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Iron (Fe) max. 0.001 %
- Calcium (Ca) max. 0.003 %
- Magnesium (Mg) max. 0.003 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0001 %
- Chromium (Cr) max. 0.0001 %
- Nickel (Ni) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %
- Arsenic (As) max. 0.0001 %
- Reducing substances complies

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1634.1000
5 kg	Plastic bottle	1634.5000

**DI-POTASSIUM HYDROGEN PHOSPHATE TRIHYDRATE P. A., PH. EUR. (MIN. 99.0 %)**

- $K_2HPO_4 \times 3 H_2O$
- CAS no. 16788-57-1
- EC no. 231-834-5
- M = 228.23 g/mol

**Specification**

- Colourless to white solid (hygroscopic)

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1661.1000

**POTASSIUM HYDROGEN PHTHALATE P. A., PH. EUR., ISO, BUFFER SUBSTANCE (MIN. 99.8 %)**

- $KC_8H_5O_4$
- CAS no. 877-24-7
- Density 1.636 g/cm<sup>3</sup>
- M = 204.22 g/mol
- EC no. 212-889-4

**Specification**

- Colourless solid
- Melting point 295 °C
- Loss on drying (105 °C) max. 0.05 %
- Cadmium (Cd) max. 0.0005 %
- Cobalt (Co) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Sodium (Na) max. 0.01 %
- Nickel (Ni) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1627.0100
1 kg	Plastic bottle	1627.1000

**POTASSIUM HYDROGEN SULPHATE**

- $KHSO_4$
- M = 136.17 g/mol
- CAS no. 7646-93-7
- EC Index no. 016-056-00-4
- EC no. 231-594-1
- Density 2.24 g/cm<sup>3</sup>
- UN-No. 2509
- ADR 8, II

**GHS**

- H314 H335
- P280 P301+P330+P331  
P305+P351+P338 P309 P310 P501

**Specification**

- Colourless solid
- Melting point 195 °C

**POTASSIUM HYDROGEN SULPHATE PURISS. (98.0 – 102.0 %)****Specification**

- Ammonium (NH<sub>4</sub>) max. 0.002 %
- Calcium (Ca) max. 0.02 %
- Iron (Fe) max. 0.002 %
- Heavy metals (as Pb) max. 0.002 %
- Chloride (Cl) max. 0.002 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1673.1000

**POTASSIUM HYDROGEN SULPHATE P. A., PH. EUR. (MIN. 99.0 %)****Specification**

- Aluminium (Al) max. 0.002 %
- Arsenic (As) max. 0.00005 %
- Calcium (Ca) max. 0.002 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Magnesium (Mg) max. 0.0005 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Nitrogen (N) max. 0.001 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1660.0500

## POTASSIUM HYDROXIDE

- KOH
- M = 56.11 g/mol
- CAS no. 1310-58-3
- EC Index no. 019-002-00-8
- EC no. 215-181-3
- Density 2.04 g/cm<sup>3</sup>
- UN-No. 1813
- ADR 8, II

### GHS

- H290 H302 H314
- P280 P301+P312 P303+P361+P353 P304+P340 P305+P351+P338 P403 P501



### Specification

- Colourless pellets
- Melting point 360 °C
- Boiling point 1320 °C

## POTASSIUM HYDROXIDE PELLETS PURISS., DAB, PH. EUR., BP, NF (MIN. 85.0 %)

### Specification

- Potassium carbonate (K<sub>2</sub>CO<sub>3</sub>) max. 1.0 %
- Aluminium (Al) max. 0.001 %
- Arsenic (As) max. 0.0003 %
- Calcium (Ca) max. 0.002 %
- Iron (Fe) max. 0.001 %
- Sodium (Na) max. 1.0 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- Silicate (SiO<sub>2</sub>) max. 0.01 %
- Nitrogen (N) max. 0.0005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1655.1000
5 kg	Plastic canister	1655.5000

## POTASSIUM HYDROXIDE PELLETS P. A., PH. EUR., ISO (MIN. 85.0 %)

### Specification

- Potassium carbonate (K<sub>2</sub>CO<sub>3</sub>) max. 1.0 %
- Aluminium (Al) max. 0.001 %
- Calcium (Ca) max. 0.001 %
- Magnesium (Mg) max. 0.001 %
- Sodium (Na) max. 0.5 %
- Chloride (Cl) max. 0.0005 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Silicate (SiO<sub>2</sub>) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.0005 %
- Nitrogen (N) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0001 %
- Chromium (Cr) max. 0.0001 %
- Nickel (Ni) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1681.1000
5 kg	Plastic canister	1681.5000

## POTASSIUM HYDROXIDE SOLUTION

- UN-No. 1814
- ADR 8, III
- GHS
- H315 H319
- P280 P302+P352 P305+P351+P338 P332+P313 P337+P313



### Specification

- Colourless liquid

## POTASSIUM HYDROXIDE SOLUTION 0.1 MOL/L (0.1 N)

- 5.61 g KOH/l H<sub>2</sub>O = 0.1 N (±0.002/20 °C)
- Density 1.01 g/ml

### Specification

- Boiling point ~100 °C
- Assay (potentiometric) 0.0999 – 0.1001 mol/l

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1663.1000



**POTASSIUM HYDROXIDE SOLUTION 0.1 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 M)**

- traceable to NIST

**Specification**

- Assay (20 °C) 0.0997 – 0.1003 M

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1612.1011

**POTASSIUM HYDROXIDE SOLUTION IN ETHANOL****Specification**

- Colourless to yellowish liquid
- Melting point -114.5 °C (ethanol)
- Boiling point 78 °C

**POTASSIUM HYDROXIDE SOLUTION IN ETHANOL 0.1 MOL/L (0.1 N)**

- 5.612 g KOH/l C<sub>2</sub>H<sub>5</sub>OH = 0.1 N (±0.0002/20 °C)
- Density 0.84 g/ml
- UN-No. 2924
- ADR 3 (8), II

**GHS**

- H225 H315 H319
- P210 P233 P241 P243 P280 P332+P313 P337+P313 P403+P235 P501



Quantity	Packaging material	Art. no.
1 l	Glass bottle	1611.1000

**POTASSIUM HYDROXIDE SOLUTION IN ETHANOL 0.5 MOL/L (0.5 N)**

- 28.055 g KOH/l C<sub>2</sub>H<sub>5</sub>OH = 0.5 N (±0.001/20 °C)
- Density 0.85 g/ml
- UN-No. 2924
- ADR 3 (8), II

**GHS**

- H225 H290 H314
- P210 P241 P243 P280 P301+P330+P331 P303+P361+P353 P305+P351+P338 P312 P403+P233 P501



Quantity	Packaging material	Art. no.
1 l	Glass bottle	1625.1000

**POTASSIUM HYDROXIDE SOLUTION IN ETHANOL 0.5 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.5 N)**

- traceable to NIST
- UN-No. 2924
- ADR 3 (8), II

**GHS**

- H225 H290 H314
- P303+P361+P353 P305+P351+P338 P310 P321 P405 P501

**Specification**

- Accuracy ±0.2 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1608.1000

## POTASSIUM IODATE

- $\text{KIO}_3$
- M = 214.00 g/mol
- CAS no. 7758-05-6
- EC no. 231-831-9

- Density 3.98 g/cm<sup>3</sup>
- UN-No. 1479
- ADR 5.1, II

### GHS

- H272 H318
- P221 P280 P305+P351+P338



### Specification

- Colourless to white solid
- Melting point 560 °C (decomposition)

## POTASSIUM IODATE PURISS., FCC (99.0 – 100.0 %)

### Specification

- Loss on drying max. 0.5 %
- Arsenic (As) max. 0.0002 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.005 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Iodide (I) max. 0.002 %
- Sulphate ( $\text{SO}_4$ ) max. 0.05 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1672.0500

## POTASSIUM IODATE P.A., ACS, ISO, PH. EUR. (MIN. 99.7 %)

### Specification

- Loss on drying (130 °C) max. 0.05 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.01 %
- Iodide (I) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Nitrogen (N) max. 0.002 %
- pH (5 %, 25 °C) 5 – 8
- Heavy metals (as Pb) max. 0.0005 %
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1688.0100

## POTASSIUM IODIDE

- KI
- M = 166.01 g/mol

- CAS no. 7681-11-0
- EC no. 231-659-4

- Density (20 °C) 3.13 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Melting point 686 °C
- Boiling point 1330 °C

## POTASSIUM IODIDE PURISS., DAB, PH. EUR., BP, PH. FRANÇ., USP (MIN. 99.0 %)

### Specification

- pH (50 g/l  $\text{H}_2\text{O}$ )  $\pm 7.0$
- Loss on drying max. 0.5 %
- Free alkali max. 0.02 %
- Iron (Fe) max. 0.001 %
- Heavy metals (as Pb) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.01 %
- Thiosulphate ( $\text{S}_2\text{O}_3$ ) max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1636.1000

## POTASSIUM IODIDE P.A., PH. EUR., ISO (MIN. 99.5 %)

### Specification

- Loss on drying max. 0.2 %
- Free alkali max. 0.02 %
- Arsenic (As) max. 0.00001 %
- Barium (Ba) max. 0.002 %
- Calcium (Ca) max. 0.001 %
- Iron (Fe) max. 0.0003 %
- Magnesium (Mg) max. 0.001 %
- Sodium (Na) max. 0.03 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.01 %
- Iodate ( $\text{IO}_3$ ) max. 0.0002 %
- Phosphate ( $\text{PO}_4$ ) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.001 %
- Thiosulphate ( $\text{S}_2\text{O}_3$ ) max. 0.005 %
- Nitrogen (N) max. 0.001 %
- pH (5 % solution) 6.0 – 8.0
- Reducing substances complies

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1618.0250

**POTASSIUM NITRATE**

- $\text{KNO}_3$
- $M = 101.10 \text{ g/mol}$
- CAS no. 7757-79-1
- EC no. 231-818-8
- Density  $2.11 \text{ g/cm}^3$
- UN-No. 1486
- ADR 5.1, III

**GHS**

- H272
- P210

**Specification**

- Colourless to white solid
- Melting point  $334 \text{ }^\circ\text{C}$
- Boiling point  $400 \text{ }^\circ\text{C}$

**POTASSIUM NITRATE PURISS., BP, FCC (99.0 – 100.5 %)****Specification**

- Loss on drying max. 0.5 %
- Ammonium ( $\text{NH}_4$ ) max. 0.005 %
- Arsenic (As) max. 0.0001 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.001 %
- Sodium (Na) max. 0.1 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Nitrite ( $\text{NO}_2$ ) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1678.1000
5 kg	Plastic bottle	1678.5000

**POTASSIUM NITRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)****Specification**

- Ammonium ( $\text{NH}_4$ ) max. 0.001 %
- Calcium (Ca) max. 0.001 %
- Copper (Cu) max. 0.0001 %
- Iron (Fe) max. 0.0002 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.0001 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Iodate ( $\text{IO}_3$ ) max. 0.0005 %
- Nitrite ( $\text{NO}_2$ ) max. 0.001 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.002 %
- Magnesium (Mg) max. 0.0015 %
- Nickel (Ni) max. 0.0001 %
- Chromium (Cr) max. 0.0001 %
- Cadmium (Cd) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %
- pH (5 %,  $25 \text{ }^\circ\text{C}$ ) 5 – 8
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1689.0500
1 kg	Plastic bottle	1689.1000

**DI-POTASSIUM OXALATE MONOHYDRATE P. A., ACS (MIN. 99.5 %)**

- $\text{K}_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$
- $M = 184.24 \text{ g/mol}$
- CAS no. 6487-48-5
- EC Index no. 607-007-00-3
- EC no. 209-506-8
- Density  $2.13 \text{ g/cm}^3$

**GHS**

- H302+H312
- P302+P352

**Specification**

- Colourless solid
- Iron (Fe) max. 0.001 %
- Sodium (Na) max. 0.02 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Phosphate ( $\text{PO}_4$ ) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.01 %
- Nitrogen (N) max. 0.001 %
- Substances darkened by  $\text{H}_2\text{SO}_4$  complies
- Insoluble matter max. 0.01 %
- Ammonium ( $\text{NH}_4$ ) max. 0.002 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1685.1000

## POTASSIUM PERMANGANATE P. A., ACS, PH. EUR., USP (MIN. 99.0 %)

- $\text{KMnO}_4$
- $M = 158.03 \text{ g/mol}$
- CAS no. 7722-64-7
- EC Index no. 025-002-00-9
- EC no. 231-760-3

- Density  $2.70 \text{ g/cm}^3$
- UN-No. 1490
- ADR 5.1, II

### GHS

- H272 H302 H410
- P210 P273



### Specification

- Dark violet crystals
- Melting point  $>240 \text{ }^\circ\text{C}$  (decomposition)
- Assay (oxidimetric) 99.0 – 100.5 %
- Appearance of solution complies
- Insoluble matter in water max. 0.2 %
- Chloride (Cl) and chlorate ( $\text{ClO}_3$ ) max. 50 ppm
- Sulphate ( $\text{SO}_4$ ) max. 200 ppm
- Identity complies

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1665.1000

## POTASSIUM PERMANGANATE SOLUTION

- UN-No. 3082
- ADR 9 (M6), III

### GHS

- H411
- P273 P391 P501



### Specification

- Purple-black liquid

### POTASSIUM PERMANGANATE SOLUTION 0.02 MOL/L (0.1 N)

- $3.161 \text{ g KMnO}_4/\text{l H}_2\text{O} = 0.1 \text{ N}$   
( $\pm 0.0002/20 \text{ }^\circ\text{C}$ )
- Density  $1.00 \text{ g/ml}$

### Specification

- Melting point  $0 \text{ }^\circ\text{C}$
- Boiling point  $100 \text{ }^\circ\text{C}$

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1675.1000
2.5 l	Glass bottle	1675.2500

### POTASSIUM PERMANGANATE SOLUTION 0.02 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 N)

- traceable to NIST

### Specification

- Accuracy ( $20 \text{ }^\circ\text{C}$ )  $\pm 0.1 \%$

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1662.1000

**POTASSIUM PEROXODISULPHATE P. A., ACS (MIN. 99.0 %)**

- $K_2S_2O_8$
- M = 270.33 g/mol
- CAS no. 7727-21-1
- EC Index no. 016-061-00-1
- EC no. 231-781-8
- Density 2.48 g/cm<sup>3</sup>
- UN-No. 1492
- ADR 5.1, III

**GHS**

- H272 H302 H315 H317 H319 H334 H335
- P210 P221 P261 P280 P284 P304+P340 P314 P362+P364 P403+P233

**Specification**

- Colourless powder
- Melting point 100 °C
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Manganese (Mn) max. 0.0001 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1621.1000

**POTASSIUM SODIUM TARTRATE TETRAHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)**

- $KNaC_4H_4O_6 \times 4 H_2O$
- M = 282.23 g/mol
- CAS no. 6381-59-5
- EC no. 206-156-8

**Specification**

- White solid
- Melting point 70 °C (decomposition)
- Calcium (Ca) max. 0.004 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Lead (Pb) max. 0.0002 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Phosphate ( $PO_4$ ) max. 0.001 %
- Sulphate ( $SO_4$ ) max. 0.005 %
- Nitrogen (N) max. 0.001 %
- pH (5 %, 25 °C) 6.5 – 8.5
- Insoluble matter in water max. 0.005 %
- Ammonium ( $NH_4$ ) max. 0.002 %
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1683.0500
1 kg	Plastic bottle	1683.1000
5 kg	Plastic bottle	1683.5000

**POTASSIUM SULPHATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)**

- $K_2SO_4$
- M = 174.27 g/mol
- CAS no. 7778-80-5
- EC no. 231-915-5
- Density 2.66 g/cm<sup>3</sup>

**Specification**

- Colourless powder
- Melting point 1069 °C
- Boiling point 1689 °C
- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.005 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Magnesium (Mg) max. 0.002 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Phosphate ( $PO_4$ ) max. 0.001 %
- Nitrogen (N) max. 0.0005 %
- pH (5 %, 25 °C) 5 – 8
- Heavy metals (as Pb) max. 0.0005 %
- Insoluble matter max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1697.1000
5 kg	Plastic bottle	1697.5000

## POTASSIUM THIOCYANATE

- KSCN
- M = 97.18 g/mol
- CAS no. 333-20-0
- EC Index no. 615-004-00-3
- EC no. 206-370-1
- Density 1.89 g/cm<sup>3</sup>

### GHS

- H302+H312+H332 H412 EUH032
- P273 P302+P352 P501



### Specification

- Colourless solid
- Melting point 175 °C
- Boiling point 500 °C (decomposition)

## POTASSIUM THIOCYANATE PURISS. (MIN. 98.0 %)

### Specification

- Ammonium (NH<sub>4</sub>) max. 0.03 %
- Iron (Fe) max. 0.0005 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.01 %
- Sulphate (SO<sub>4</sub>) max. 0.05 %
- Sulphur (S) max. 0.002 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1695.1000

## POTASSIUM THIOCYANATE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)

### Specification

- Insoluble matter max. 0.01 %
- Ammonium (NH<sub>4</sub>) max. 0.001 %
- Copper (Cu) max. 0.0002 %
- Iron (Fe) max. 0.0001 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.0002 %
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.001 %
- Sulphur (S) max. 0.001 %
- pH (5 %, 25 °C) 5.3 – 8.5
- Iodide (I) max. 0.025 %
- Insoluble matter in water max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1679.0250

## 1,3-PROPANEDIOL FOR SYNTHESIS, PURE (MIN. 99.7 %)

- C<sub>3</sub>H<sub>8</sub>O<sub>2</sub>
- M = 76.09 g/mol
- CAS no. 504-63-2
- EC no. 207-997-3
- Density (20 °C) 1.054 g/cm<sup>3</sup>



### Specification

- Clear, viscous liquid
- Melting point -26 °C
- Boiling point 213 °C
- Identity (IR) complies
- Refractive index (20 °C) 1.438 – 1.442
- Water (KF) max. 1000 mg/kg
- Colour (Hazen) max. 15

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1180.1000
5 l	Plastic canister	1180.5000

## 1-PROPANOL P. A., PH. EUR. (MIN. 99.5 %)

- C<sub>3</sub>H<sub>7</sub>OH
- M = 60.10 g/mol
- CAS no. 71-23-8
- EC Index no. 603-003-00-0
- EC no. 200-746-9
- Density (20 °C) 0.803 – 0.805 g/ml
- UN-No. 1274
- ADR 3, II

### GHS

- H225 H302 H318 H336
- P210 P261 P280 P305+P351+P338 P310 P403+P233



### Specification

- Clear liquid
- Boiling point 96 – 98 °C
- Colour (APHA) max. 10
- Refractive index (20 °C) 1.3840 – 1.3860
- Distillation range 96 – 99 °C
- Acidity (as CH<sub>3</sub>COOH) max. 0.03 %
- Water (KF) max. 1000 ppm
- Residue on evaporation max. 5 ppm
- Identity (IR) complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1188.1000
2.5 l	Glass bottle	1188.2500

**2-PROPANOL**

- $\text{CH}_3\text{CH}(\text{OH})\text{CH}_3$
- M = 60.10 g/mol
- CAS no. 67-63-0
- EC Index no. 603-117-00-0
- EC no. 200-661-7
- UN-No. 1219
- ADR 3, II

**GHS**

- H225 H319 H336
- P210 P233 P241 P243 P261 P280  
P305+P351+P338 P312 P403+P235 P501

**Specification**

- Clear, colourless liquid
- Melting point -89 °C
- Boiling point 81 – 83 °C

**2-PROPANOL FOR DISINFECTION (MIN. 70.0 %)**

- Density 0.81 – 0.84 g/ml

**Specification**

- Assay min. 70.0 % w/v
- Sterile filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1199.1000
1 l	Plastic spray bottle	1199.1009
5 l	Plastic canister	1199.5000

**2-PROPANOL PH. EUR. (MIN. 99.9 %)****Specification**

- Identity (IR) complies
- Appearance of solution complies
- Refractive index (20 °C) 1.376 – 1.379
- Benzene ( $\text{C}_6\text{H}_6$ ) max. 2 ppm
- Other impurities max. 0.3 %
- Non-volatile substances max. 20 ppm
- Water max. 0.5 % m/v
- UV absorption at 230 nm max. 0.30 AU
- UV absorption at 250 nm max. 0.10 AU
- UV absorption at 270 nm max. 0.03 AU
- UV absorption at 290 nm max. 0.02 AU
- UV absorption at 310 nm max. 0.01 AU
- Relative density 0.785 – 0.789
- Peroxides complies
- Acidic or alkaline substances complies

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1184.1000
25 l	Plastic canister	1184.9025

**2-PROPANOL TECHNICAL, PURE (MIN. 99.8 %)**

- Density (20 °C) 0.784 – 0.787 g/ml

**Specification**

- Appearance of solution clear, colourless
- Refractive index (20 °C) 1.376 – 1.379
- Colour (APHA) max. 10
- Acidity (as  $\text{CH}_3\text{COOH}$ ) max. 0.001 %
- Water max. 0.1 %

Quantity	Packaging material	Art. no.
200 l	Metal drum	1155.9200

**2-PROPANOL PURE (MIN. 99.0 %)**

- Density 0.78 g/ml

**Specification**

- Non-volatile substances max. 0.002 %
- Water max. 0.1 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1157.1000
5 l	Plastic canister	1157.5000
25 l	Plastic canister	1157.9025



More information about Green Solvents → see page 355

## 2-PROPANOL PURISS., DAC, BP, BELG. PHARM. VI, USP (MIN. 99.8 %)

- Density 0.78 g/ml

### Specification

- Non-volatile substances max. 0.002 %
- Water max. 0.2 %
- Free acid max. 0.002 %
- Iron (Fe) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0002 %
- Aldehydes und Ketones max. 0.05 %
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 0.0002 %
- Methanol (CH<sub>3</sub>OH) max. 0.1 %

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	1182.2500
5 l	Plastic canister	1182.5000
25 l	Metal drum	1182.9025

## 2-PROPANOL PURISS. (MIN. 99.9 %)

### Specification

- Appearance of solution complies
- Acidity or alkalinity complies
- Peroxides complies
- Relative density 0.785 – 0.789
- Refractive index (20 °C) 1.376 – 1.379
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 2 ppm
- Other impurities max. 0.3 %
- Non-volatile substances max. 20 ppm
- Water max. 0.5 %
- UV absorption at 230 nm max. 0.30
- UV absorption at 250 nm max. 0.10
- UV absorption at 270 nm max. 0.03
- UV absorption at 290 nm max. 0.02
- UV absorption at 310 nm max. 0.01

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1197.1000
5 l	Plastic canister	1197.5000
10 l	Plastic canister	1197.9010
25 l	Plastic canister	1197.9025

## 2-PROPANOL P. A., ACS, ISO, PH. EUR. (MIN. 99.8 %)

- Density 0.784 – 0.786 g/ml

### Specification

- Non-volatile substances max. 0.0005 %
- Water max. 0.1 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Acetone (CH<sub>3</sub>COCH<sub>3</sub>) max. 0.002 %
- Ethanol (C<sub>2</sub>H<sub>5</sub>OH) max. 0.01 %
- Methanol (CH<sub>3</sub>OH) max. 0.1 %
- Carbonyl compounds max. 0.002 %
- Reducing substances max. 0.0005 %
- Residue on evaporation max. 0.001 %
- Solubility in water complies
- Colour (APHA) max. 10
- Acidity max. 0.0001 meq/g
- Alkalinity max. 0.0001 meq/g
- Benzene and related substances max. 0.002 %
- UV absorption at 230 nm max. 0.300
- UV absorption at 250 nm max. 0.100
- UV absorption at 270 nm max. 0.030
- UV absorption at 290 nm max. 0.020
- UV absorption at 310 nm max. 0.010
- Sodium (Na) max. 0.0001 %
- Sulphur (S) max. 0.00005 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1136.1000
2.5 l	Glass bottle	1136.2500
2.5 l	Plastic bottle	1136.2511
5 l	Plastic canister	1136.5000
25 l	Metal drum	1136.9025
50 l	Metal drum	1136.9050
200 l	Metal drum	1136.9200



**2-PROPANOL FOR HPLC (MIN. 99.8 %)**

- Density (20 °C) 0.78 g/ml

**Specification**

- Refractive index (20 °C) 1.375 – 1.379
- Water (KF) max. 500 mg/kg
- Non-volatile substances max. 7 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 10 mg/kg
- UV transmittance at 210 nm min. 20 %
- UV transmittance at 230 nm min. 75 %
- UV transmittance at 260 nm min. 98 %
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1164.1000
2.5 l	Glass bottle	1164.2500

**2-PROPANOL FOR LC-MS (MIN. 99.95 %)**

- Density (20 °C) 0.78 g/ml

**Specification**

- Identity (IR) complies
- Refractive index (20 °C) 1.375 – 1.379
- Water (KF) max. 200 mg/kg
- Residue on evaporation max. 2 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 0.0010 %
- Free alkali (as NH<sub>3</sub>) max. 0.0005 %
- UV transmittance at 220 nm min. 64.0 %
- UV transmittance at 230 nm min. 80.0 %
- UV transmittance at 260 nm min. 98.5 %
- HPLC gradient test complies
- HPLC gradient (peak) at 254 nm max. 2 mAU
- Aluminium (Al) max. 0.000005 %
- Iron (Fe) max. 0.000005 %
- Sodium (Na) max. 0.000005 %
- Calcium (Ca) max. 0.000005 %
- Magnesium (Mg) max. 0.000005 %
- Potassium (K) max. 0.000005 %
- Sensitive impurities (reserpine) max. 100 ppb
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1178.1000
2.5 l	Glass bottle	1178.2500

**2-PROPANOL FOR UHPLC-MS (MIN. 99.95 %)**

- Density 0.785 g/ml

**Specification**

- Assay (GC, on anhydrous basis) 99.95 – 100.0 %
- Colour (APHA) max. 5
- Residue on evaporation max. 0.0001 % w/w
- Water (KF) max. 0.05 % w/w
- Acidity (as CH<sub>3</sub>COOH) max. 0.001 %
- Alkalinity (as NH<sub>4</sub>) max. 0.0001 %
- LC-MS suitability test (reserpine) max. 20 ppb
- Gradient test at 235 nm max. 1.0 mAU
- Gradient test at 254 nm max. 1.0 mAU
- Fluorescence (as quinine) at 254 nm max. 0.5 ppb
- Fluorescence (as quinine) at 365 nm max. 0.5 ppb
- UV transmittance at 220 nm min. 80 %
- UV transmittance at 230 nm min. 90 %
- UV transmittance at 250 nm min. 99 %
- Silver (Ag) max. 50 ppb
- Aluminium (Al) max. 20 ppb
- Barium (Ba) max. 50 ppb
- Bismuth (Bi) max. 50 ppb
- Calcium (Ca) max. 50 ppb
- Cadmium (Cd) max. 50 ppb
- Cobalt (Co) max. 20 ppb
- Chromium (Cr) max. 20 ppb
- Iron (Fe) max. 20 ppb
- Potassium (K) max. 50 ppb
- Lithium (Li) max. 50 ppb
- Magnesium (Mg) max. 20 ppb
- Manganese (Mn) max. 20 ppb
- Molybdenum (Mo) max. 50 ppb
- Sodium (Na) max. 50 ppb
- Nickel (Ni) max. 20 ppb
- Lead (Pb) max. 20 ppb
- Tin (Sn) max. 50 ppb
- Strontium (Sr) max. 50 ppb
- Zinc (Zn) max. 50 ppb
- Filtered through 0.1 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1179.1000
2.5 l	Glass bottle	1179.2500

## 2-PROPANOL VLSI (MIN. 99.8 %)

### Specification

- Assay (GC, on anhydrous basis) 99.8 – 100.0 %
- Colour (APHA) max. 10
- Residue on evaporation max. 0.0003 % w/w
- Water (KF) max. 0.05 % w/w
- Acidity (as CH<sub>3</sub>COOH) max. 0.001 %
- Alkalinity (as NH<sub>3</sub>) max. 0.0002 %
- Chloride (Cl) max. 0.1 ppm
- Phosphate (PO<sub>4</sub>) max. 0.3 ppm
- Silver (Ag) max. 10 ppb
- Aluminium (Al) max. 20 ppb
- Arsenic (As) max. 10 ppb
- Gold (Au) max. 10 ppb
- Boron (B) max. 10 ppb
- Barium (Ba) max. 10 ppb
- Beryllium (Be) max. 10 ppb
- Bismuth (Bi) max. 30 ppb
- Calcium (Ca) max. 30 ppb
- Cadmium (Cd) max. 20 ppb
- Cobalt (Co) max. 20 ppb
- Chromium (Cr) max. 20 ppb
- Copper (Cu) max. 10 ppb
- Iron (Fe) max. 25 ppb
- Gallium (Ga) max. 20 ppb
- Germanium (Ge) max. 20 ppb
- Potassium (K) max. 50 ppb
- Lithium (Li) max. 30 ppb
- Magnesium (Mg) max. 20 ppb
- Manganese (Mn) max. 15 ppb
- Molybdenum (Mo) max. 20 ppb
- Sodium (Na) max. 50 ppb
- Niobium (Nb) max. 20 ppb
- Nickel (Ni) max. 10 ppb
- Lead (Pb) max. 20 ppb
- Antimony (Sb) max. 10 ppb
- Silicon (Si) max. 30 ppb
- Tin (Sn) max. 20 ppb
- Strontium (Sr) max. 20 ppb
- Tantalum (Ta) max. 20 ppb
- Titanium (Ti) max. 20 ppb
- Thallium (Tl) max. 10 ppb
- Vanadium (V) max. 20 ppb
- Zinc (Zn) max. 30 ppb
- Zirconium (Zr) max. 30 ppb
- Particle count >0.5 µm max. 100 P/ml
- Particle count >1.0 µm max. 10 P/ml
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	1138.2500
5 l	Plastic bottle	1138.5000
25 l	Plastic canister	1138.9025
200 l	Plastic drum	1138.9200

## PROTEINASE K LYOPHILIZED FROM TRITIRACHIUM ALBUM LIMBER (MIN. 95.0 %)

- CAS no. 39450-01-6
- EC Index no. 647-014-00-9
- EC no. 254-457-8

### GHS

- H334
- P304+P341



### Specification

- White powder
- Enzyme activity min. 30.0 U/mg dry weight
- DNA, RNA not detectable
- DNase, RNase not detectable

Quantity	Packaging material	Art. no.
10 g	Glass bottle	8470.0010
50 g	Glass bottle	8470.0050

## PYRIDINE P. A. (MIN. 99.0 %)

- C<sub>5</sub>H<sub>5</sub>N
- M = 79.10 g/mol
- CAS no. 110-86-1
- EC Index no. 613-002-00-7
- EC no. 203-809-9
- Density 0.98 g/ml
- UN-No. 1282
- ADR 3, II

### GHS

- H225 H302+H312+H332
- P210 P233 P241 P243 P261 P280 P303+P361+P353 P304+P340 P312 P403+P235 P501



### Specification

- Clear, colourless liquid
- Melting point -42 °C
- Boiling point 114.2 – 116.2 °C
- Identity complies
- Water (KF) max. 0.1 %
- Residue on evaporation max. 20 ppm
- Ammonium (NH<sub>4</sub>) max. 20 ppm
- Chloride (Cl) max. 10 ppm
- Sulphate (SO<sub>4</sub>) max. 10 ppm
- Copper (Cu) max. 5 ppm
- Substances reducing KMnO<sub>4</sub> complies
- Solubility in water complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1162.1000
2.5 l	Glass bottle	1162.2500

**D-RAFFINOSE PENTAHYDRATE (MIN. 99.0 %)**

- $C_{18}H_{32}O_{16} \times 5 H_2O$
- M = 594.52 g/mol
- CAS no. 17629-30-0
- EC no. 208-146-9
- Density 1.465 g/cm<sup>3</sup>

**Specification**

- White solid
- Melting point 80 °C
- Water 14.0 – 16.0 %
- Heavy metals max. 0.001 %
- Reducing substances max. 1.0 %

Quantity	Packaging material	Art. no.
25 g	Glass bottle	8277.0025

**RUBIDIUM CHLORIDE P. A. (MIN. 99.5 %)**

- RbCl
- M = 120.92 g/mol
- CAS no. 7791-11-9
- EC no. 232-240-9
- Density 2.76 g/cm<sup>3</sup>

**Specification**

- Colourless solid
- Melting point 715 °C
- Boiling point 1390 °C
- Aluminium (Al) max. 0.001 %
- Copper (Cu) max. 0.0003 %
- Iron (Fe) max. 0.0003 %
- Magnesium (Mg) max. 0.0005 %
- Lead (Pb) max. 0.0003 %
- Zinc (Zn) max. 0.0003 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.003 %

Quantity	Packaging material	Art. no.
10 g	Plastic bottle	990.0010

**SEA SAND PURIFIED BY ACID AND CALCINED P. A., DAB**

- SiO<sub>2</sub>
- M = 60.09 g/mol
- CAS no. 7631-86-9
- EC no. 231-545-4
- Density 2.66 g/cm<sup>3</sup>

**Specification**

- Acid-soluble iron (Fe) max. 0.01 %
- Acid-soluble substances max. 0.15 %
- Loss on ignition max. 0.05 %
- Chloride (Cl) max. 0.005 %
- Particle size 0.1 – 0.3 mm

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	804.1000
25 kg	Fibre drum	804.9025

**SILICA GEL GRANULAR WITH HUMIDITY INDICATOR COBALT FREE**

- SiO<sub>2</sub>
- CAS no. 112926-00-8
- EC no. 231-545-4

**Specification**

- Brownish granular
- Identity complies
- Grain size 2.5 – 6 mm
- Changing of colour:  
Amber brown: dry, full drying efficiency
- Aquamarine green: humid, exhausted efficiency

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1616.1000
5 kg	Plastic bottle	1616.5000
25 kg	Plastic bucket	1616.9025



Isopropanol → see page 224

## SILVER NITRATE P. A. (MIN. 99.0 %)

- AgNO<sub>3</sub>
- M = 169.87 g/mol
- CAS no. 7761-88-8
- EC Index no. 047-001-00-2
- EC no. 231-853-9
- Density 4.35 g/cm<sup>3</sup>
- UN-No. 1493
- ADR 5.1, II

### GHS

- H272 H314 H410
- P221 P260 P273 P280 P301+P330+P331 P303+P361+P353 P305+P351+P338 P308+P311 P391 P403+P235 P501



### Specification

- Colourless to white solid
- Melting point 212 °C
- Boiling point 440 °C
- Chloride (Cl) max. 5 ppm
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- Copper (Cu) max. 2 ppm
- Iron (Fe) max. 2 ppm
- Lead (Pb) max. 0.001 %

Quantity	Packaging material	Art. no.
50 g	Plastic bottle	878.0050
250 g	Plastic bottle	878.0250

## SILVER NITRATE SOLUTION

- 16.987 g AgNO<sub>3</sub>/l H<sub>2</sub>O = 0.1 N  
(±0.0002/20 °C)
- Density 1.01 g/ml
- UN-No. 3082
- ADR 9, III

### GHS

- H315 H319 H410
- P273 P280 P332+P313 P337+P313 P391 P501



## SILVER NITRATE SOLUTION 0.1 MOL/L (0.1 N)

### Specification

- Colourless liquid
- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	881.1000
5 l	Polytainer	881.5000
10 l	Polytainer	881.9011

## SILVER NITRATE SOLUTION 0.1 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 N)

- traceable to NIST

### Specification

- Accuracy (20 °C) ±0.2 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	803.1011



**SILVER SULPHATE P. A., ACS (MIN. 99.5 %)**

- Ag<sub>2</sub>SO<sub>4</sub>
- M = 311.77 g/mol
- CAS no. 10294-26-5
- EC no. 233-653-7
- Density 5.45 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

**GHS**

- H315 H319 H335 H400
- P273 P305+P351+P338 P501



**Specification**

- Colourless solid
- Melting point 652 °C
- Boiling point 1085 °C
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Nickel (Ni) max. 0.001 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Nitrate (NO<sub>3</sub>) max. 0.001 %
- Insoluble matter max. 0.02 %
- Substances not precipitated by hydrochloric acid max. 0.03 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	887.0100

**SILVER SULPHATE SOLUTION**

- Density 1.84 g/ml
- UN-No. 1830
- ADR 8, II

**GHS**

- H290 H314
- P260 P280 P301+P330+P331 P303+P361+P338 P305+P361+P353 P310 P390 P501



**Specification**

- Colourless liquid

**SILVER SULPHATE SOLUTION FOR COD DETERMINATION (10 G/L IN H<sub>2</sub>SO<sub>4</sub> (D=1.84 G/ML))**

**Specification**

- Silver sulphate (Ag<sub>2</sub>SO<sub>4</sub>) 9.0 – 11.0 g/l

Quantity	Packaging material	Art. no.
1 l	Glass bottle	811.1000
2.5 l	Glass bottle	811.2500

**SILVER SULPHATE SOLUTION FOR COD DETERMINATION (80 G/L IN H<sub>2</sub>SO<sub>4</sub> (D=1.84 G/ML) ACC. DIN 38409-H43-1)**

**Specification**

- Melting point -5 °C
- Boiling point 330 °C
- Silver sulphate (Ag<sub>2</sub>SO<sub>4</sub>) 78.8 – 81.2 g/l

Quantity	Packaging material	Art. no.
1 l	Glass bottle	818.1000

**SODIUM ACETATE ANHYDROUS P. A., ACS, PH. EUR., USP (MIN. 99.0 %)**

- CH<sub>3</sub>COONa
- M = 82.03 g/mol
- CAS no. 127-09-3
- EC no. 204-823-8

**Specification**

- White powder
- Chloride (Cl) max. 0.002 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.003 %
- Aluminium (Al) max. 0.001 %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.0003 %
- Iron (Fe) max. 0.05 ppm
- Potassium (K) max. 0.05 %
- Magnesium (Mg) max. 0.002 %
- Heavy metals (as Pb) max. 0.001 %
- pH (5 %, 25 °C) 7.5 – 9.0
- Loss on drying max. 1.0 %
- Non-volatile substances max. 0.01 %
- Insoluble matter max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	8694.1000
2.5 kg	Plastic bottle	8694.2500

## SODIUM ACETATE TRIHYDRATE

- $\text{CH}_3\text{COONa} \times 3 \text{H}_2\text{O}$
- M = 136.08 g/mol
- CAS no. 6131-90-4
- EC no. 204-823-8
- Density 1.42 g/cm<sup>3</sup>

### Specification

- Colourless to white solid
- Melting point 58 °C

## SODIUM ACETATE TRIHYDRATE PURISS., DAB, PH. EUR., BP, PH. FRANÇ., USP, FCC (99.0 – 101.0 %)

### Specification

- Aluminium (Al) max. 0.00002 %
- Arsenic (As) max. 0.0002 %
- Calcium (Ca) max. 0.002 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.01 %
- Magnesium (Mg) max. 0.002 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Reducing substances max. 0.002 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1322.1000
5 kg	Plastic bottle	1322.5000

## SODIUM ACETATE TRIHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)

### Specification

- Aluminium (Al) max. 0.00002 %
- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.001 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- Reducing substances max. 0.005 %
- pH (5 %, 25 °C) 7.5 – 9
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1307.0500
1 kg	Plastic bottle	1307.1000
5 kg	Plastic bottle	1307.5000

## SODIUM AZIDE P. A. (MIN. 99.5 %)

- $\text{NaN}_3$
- M = 65.01 g/mol
- CAS no. 26628-22-8
- EC Index no. 011-004-00-7
- EC no. 247-852-1
- UN-No. 1687
- ADR 6.1, II

### GHS

- H300 H410 EUH032
- P273 P301+P310 P330 P501



### Specification

- Insoluble matter max. 0.01 %
- Solubility in water 420 g/l
- Chloride (Cl) max. 0.001 %
- Heavy metals (as Pb) max. 0.005 %
- Loss on drying max. 0.1 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	8690.0250

## SODIUM BENZOAT PURISS., PH. EUR., BP, NF, J. P., FCC (99.0 – 100.5 %)

- $\text{C}_7\text{H}_5\text{NaO}_2$
- M = 144.11 g/mol
- CAS no. 532-32-1
- EC no. 208-534-8
- Density 1.5 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Melting point 436 °C
- Chloride (Cl) max. 0.02 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %
- Heavy metals (as Pb) max. 0.001 %
- Arsenic (As) max. 0.0001 %
- Cadmium (Cd) max. 0.001 %
- Copper (Cu) max. 0.001 %
- Mercury (Hg) max. 0.0001 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.001 %
- Loss on drying max. 1.5 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1334.1000

**SODIUM BOROHYDRIDE P. A. (MIN. 95.0 %)**

- NaBH<sub>4</sub>
- M = 37.83 g/mol
- CAS no. 16940-66-2
- EC no. 241-004-4
- Density 1.07 g/cm<sup>3</sup>
- UN-No. 1426
- ADR 4.3, I

**GHS**

- H260 H301+H311 H314
- P280 P301+P330+P331 P302+P352 P305+P351+P338 P309 P310 P402+P404 P501

**Specification**

- Colourless solid
- Melting point 400 °C
- Boiling point 500 °C
- Arsenic (As) max. 0.001 %
- Bismuth (Bi) max. 0.0005 %
- Iron (Fe) max. 0.005 %
- Mercury (Hg) max. 0.001 %
- Antimony (Sb) max. 0.005 %
- Selenium (Se) max. 0.0002 %
- Chloride (Cl) max. 0.5 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Heavy metals (as Pb) max. 0.005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1386.0100

**SODIUM CARBONATE ANHYDROUS P. A., ACS, ISO, PH. EUR. (MIN. 99.8 %)**

- Na<sub>2</sub>CO<sub>3</sub>
- M = 105.99 g/mol
- CAS no. 497-19-8
- EC Index no. 011-005-00-2
- EC no. 207-838-8
- Density 2.53 g/cm<sup>3</sup>

**GHS**

- H319
- P264 P280 P305+P351+P338 P337+P313

**Specification**

- Colourless powder
- Melting point 854 °C
- Boiling point 1600 °C
- Aluminium (Al) max. 0.001 %
- Arsenic (As) max. 0.00005 %
- Calcium (Ca) max. 0.005 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.003 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Silicate (SiO<sub>2</sub>) max. 0.002 %
- Nitrogen (N) max. 0.001 %
- Loss on drying (300 °C) max. 0.5 %
- Heavy metals (as Pb) max. 0.0005 %
- Sulphur (S) max. 0.005 %
- Insoluble matter max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1393.1000
2.5 kg	Plastic bottle	1393.2500

**SODIUM CARBONATE DECAHYDRATE P. A., ISO, PH. EUR. (MIN. 99.0 %)**

- Na<sub>2</sub>CO<sub>3</sub> x 10 H<sub>2</sub>O
- M = 286.14 g/mol
- CAS no. 6132-02-1
- EC Index no. 011-005-00-2
- EC no. 207-838-8
- Density 1.44 g/cm<sup>3</sup>

**GHS**

- H319
- P280 P305+P351+P338

**Specification**

- Colourless solid
- Melting point 33 °C
- Aluminium (Al) max. 0.0005 %
- Arsenic (As) max. 0.00001 %
- Calcium (Ca) max. 0.002 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0002 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.0002 %
- Lead (Pb) max. 0.0002 %
- Zinc (Zn) max. 0.0005 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Nitrogen (N) max. 0.0005 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Silicate (SiO<sub>2</sub>) max. 0.001 %
- Sulphur (S) max. 0.003 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1311.1000

## SODIUM CHLORIDE

- NaCl
- M = 58.44 g/mol
- CAS no. 7647-14-5
- EC no. 231-598-3

### Specification

- Colourless crystals or white, crystalline powder
- Melting point 800 °C
- Boiling point 1461 °C

## SODIUM CHLORIDE PH. EUR. (99.0 – 100.5 %)

### Specification

- without anti-caking agent
- Identity complies
- Appearance of 20 % solution complies
- Acidity (0.01 M NaOH) max. 0.5 ml
- Alkalinity (0.01 M HCl) max. 0.5 ml
- Bromide (Br) max. 50 mg/kg
- Hexacyanoferrates (Fe(CN)<sub>6</sub>) max. 0.5 mg/kg
- Iodide (I) complies
- Nitrite (NO<sub>2</sub>) (Absorbance at 354 nm) max. 0.01
- Phosphate (PO<sub>4</sub>) max. 25 mg/kg
- Sulphate (SO<sub>4</sub>) max. 150 mg/kg
- Aluminium (Al) max. 0.2 mg/kg
- Arsenic (As) max. 0.5 mg/kg
- Barium (Ba) max. 1 mg/kg
- Heavy metals (as Pb) max. 5 mg/kg
- Iron (Fe) max. 0.8 mg/kg
- Calcium (Ca) max. 20 mg/kg
- Magnesium (Mg) max. 21 mg/kg
- Potassium (K) max. 300 mg/kg
- Loss on drying max. 0.5 %
- Endotoxins max. 5.0 I.U./g
- pH 4.5 – 7.0

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1367.1000
5 kg	Plastic bucket	1367.5000
25 kg	Plastic bucket	1367.9025

## SODIUM CHLORIDE P. A., ASTM B117, ISO 9227/2017 (MIN. 99.8 %)

### Specification

- without anti-caking agent
- Assay (argentometric) min. 99.8 %
- Identity complies
- Heavy metals (as Pb) max. 5 ppm
- Loss on drying max. 0.5 %
- Copper (Cu) max. 0.3 ppm
- Nickel (Ni) max. 10 ppm
- Other halogens (I, Br, F) max. 0.1 %
- Total impurities max. 0.3 %
- Sodium iodide (NaI) max. 0.1 %

Quantity	Packaging material	Art. no.
5 kg	Plastic bottle	1399.5000
25 kg	Metal drum	1399.9025

## TRI-SODIUM CITRATE DIHYDRATE P. A., ACS (MIN. 99.0 %)

- C<sub>6</sub>H<sub>5</sub>Na<sub>3</sub>O<sub>7</sub> · x 2 H<sub>2</sub>O
- M = 294.1 g/mol
- CAS no. 6132-04-3
- EC no. 200-675-3
- Density 1.98 g/cm<sup>3</sup>

### Specification

- Colourless crystals or white, crystalline powder
- Melting point 150 °C
- Insoluble matter in water max. 0.005 %
- pH (5.0 % H<sub>2</sub>O) 7 – 9
- Chloride (Cl) max. 0.001 %
- Phosphate (PO<sub>4</sub>) max. 0.002 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Ammonium (NH<sub>4</sub>) max. 0.001 %
- Heavy metals (as Pb) max. 0.0005 %
- Arsenic (As) max. 0.0001 %
- Zinc (Zn) max. 0.0005 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1328.1000

## TRI-SODIUM CITRATE SOLUTION

- Density 1.25 g/ml

### Specification

- Colourless, light yellow liquid
- Assay (as Na<sub>3</sub>C<sub>6</sub>H<sub>5</sub>O<sub>7</sub> · x 2 H<sub>2</sub>O) ~34.8 %
- Assay (as C<sub>6</sub>H<sub>8</sub>H<sub>7</sub> · x H<sub>2</sub>O) 24.5 – 25.3 %
- pH (concentrate) 8 – 9

Quantity	Packaging material	Art. no.
25 kg	Plastic canister	738.9025



**SODIUM DICHLOROISOCYANURATE PURISS. (MIN. 98.0 %)**

- $C_3Cl_2N_3NaO_3$
- M = 219.95 g/mol
- CAS no. 2893-78-9
- EC Index no. 613-030-00-X
- EC no. 220-767-7
- UN-No. 2465
- ADR 5.1, II

**GHS**

- H272 H302 H319 H335 H410 EUH031
- P220 P261 P273 P305+P351+P338 P501

**Specification**

- Colourless solid

Quantity	Packaging material	Art. no.
100 g	Glass bottle	1316.0100

**SODIUM DIETHYLDITHIOCARBAMATE TRIHYDRATE P. A., ACS (MIN. 97.0 %)**

- $C_5H_{10}NNaS_2 \times 3 H_2O$
- M = 225.31 g/mol
- CAS no. 20624-25-3
- EC no. 205-710-6
- Density 1 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

**GHS**

- H302 H400
- P273

**Specification**

- Colourless solid
- Melting point 93 °C
- Solubility in water complies
- Reagent for copper determination

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1308.0100

**SODIUM DIHYDROGEN PHOSPHATE DIHYDRATE**

- $NaH_2PO_4 \times 2 H_2O$
- M = 156.01 g/mol
- CAS no. 13472-35-0
- EC no. 231-449-2
- Density 1.92 g/cm<sup>3</sup>

**Specification**

- Colourless to white solid
- Melting point 60 °C

**SODIUM DIHYDROGEN PHOSPHATE DIHYDRATE PURISS., DAB, PH. EUR., BP, USP, FCC (98.0 – 100.5 %)****Specification**

- Loss on drying 21.5 – 24.0 %
- Arsenic (As) max. 0.0002 %
- Calcium (Ca) max. 0.002 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.0005 %
- Magnesium (Mg) max. 0.002 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.005 %
- Fluoride (F) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.02 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1357.1000
5 kg	Plastic bottle	1357.5000

**SODIUM DIHYDROGEN PHOSPHATE DIHYDRATE P. A., ACS (MIN. 99.0 %)****Specification**

- Arsenic (As) max. 0.0002 %
- Calcium (Ca) max. 0.002 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.001 %
- Magnesium (Mg) max. 0.002 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.005 %
- Fluoride (F) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.02 %
- Heavy metals (as Pb) max. 0.0005 %
- Mercury (Hg) max. 0.0001 %
- Reducing substances max. 0.04 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1346.1000

## SODIUM DIHYDROGEN PHOSPHATE MONOHYDRATE P. A., ACS (99.0 – 102.0 %)

- $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$
- M = 137.99 g/mol
- CAS no. 10049-21-5
- EC no. 231-449-2
- Density 2.04 g/cm<sup>3</sup>

### Specification

- Colourless to white solid
- Melting point 100 °C
- Insoluble matter max. 0.01 %
- Sulphate ( $\text{SO}_4$ ) max. 0.002 %
- Nitrogen (N) max. 0.001 %
- Potassium (K) max. 0.005 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0005 %
- Arsenic (As) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Cadmium (Cd) max. 0.0001 %
- Copper (Cu) max. 0.0001 %
- Chromium (Cr) max. 0.0001 %
- Nickel (Ni) max. 0.0001 %
- Heavy metals (as Pb) max. 0.0005 %
- pH (5 %, 25 °C) 4.1 – 4.5

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1373.0500
1 kg	Plastic bottle	1373.1000
25 kg	Fiber drum	1373.9025

## SODIUM DODECYL SULPHATE PURISS. (MIN. 98.0 %)

- $\text{NaC}_{12}\text{H}_{25}\text{SO}_4$
- M = 288.38 g/mol
- CAS no. 151-21-3
- EC no. 205-788-1
- Density 1.1 g/cm<sup>3</sup>
- UN-No. 1325
- ADR 4.1, III

### GHS

- H228 H302+H332 H315 H318 H335 H412
- P210 P261 P273 P280 P305+P351+P338 P501



### Specification

- Colourless to white solid
- Melting point 204 – 207 °C
- Loss on drying max. 2 %
- Calcium (Ca) max. 0.001 %
- Cadmium (Cd) max. 0.0005 %
- Cobalt (Co) max. 0.0005 %
- Chromium (Cr) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.02 %
- Magnesium (Mg) max. 0.0005 %
- Manganese (Mn) max. 0.0005 %
- Nickel (Ni) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.01 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0001 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1347.0100
1 kg	Plastic bottle	1347.1000

## SODIUM FLUORIDE

- NaF
- M = 41.99 g/mol
- CAS no. 7681-49-4
- EC Index no. 009-004-00-7
- EC no. 231-667-8
- Density 2.8 g/cm<sup>3</sup>
- UN-No. 1690
- ADR 6.1, III

### GHS

- H301 H315 H319 EUH032
- P302+P352 P305+P351+P338 P308+P311 P501



### Specification

- Colourless to white solid
- Melting point 996 °C
- Boiling point 1704 °C

## SODIUM FLUORIDE PURISS., DAB, PH. EUR., BP, PH. FRANÇ., USP (98.5 – 100.5 %)

### Specification

- Loss on drying max. 0.5 %
- Free acid max. 0.2 %
- Free alkali max. 0.1 %
- Iron (Fe) max. 0.005 %
- Heavy metals (as Pb) max. 0.002 %
- Sodium hexafluorosilicate ( $\text{Na}_2[\text{SiF}_6]$ ) max. 0.2 %
- Chloride (Cl) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.02 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1319.1000

**SODIUM FLUORIDE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)****Specification**

- Loss on drying (150 °C) max. 0.2 %
- Free acid max. 0.05 %
- Free alkali max. 0.04 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Sodium hexafluorosilicate (Na<sub>2</sub>[SiF<sub>6</sub>]) max. 0.1 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %
- Sulphite (SO<sub>3</sub>) max. 0.005 %
- Insoluble matter in water max. 0.02 %
- Insoluble matter max. 0.02 %
- Acidity max. 0.03 meq/g
- Alkalinity max. 0.01 meq/g
- Potassium (K) max. 0.02 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1313.0250
1 kg	Plastic bottle	1313.1000

**SODIUM HYDROGEN CARBONATE P. A., ACS, PH. EUR., ISO (MIN. 99.7 %)**

- NaHCO<sub>3</sub>
- M = 84.01 g/mol
- CAS no. 144-55-8
- EC no. 205-633-8
- Density 2.2 g/cm<sup>3</sup>

**Specification**

- Ammonium (NH<sub>4</sub>) max. 0.0005 %
- Calcium (Ca) max. 0.005 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Phosphate (PO<sub>4</sub>) max. 0.001 %
- Reducing substances max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.003 %
- Insoluble matter max. 0.015 %
- Heavy metals (as Pb) max. 0.0005 %
- Total nitrogen (N) max. 0.0005 %
- Iodide (I) max. 0.0065 %
- Silicate (SiO<sub>2</sub>) max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	8630.1000
5 kg	Plastic bottle	8630.5000
25 kg	Fiber drum	8630.9025

**DI-SODIUM HYDROGEN PHOSPHATE ANHYDROUS P. A., ACS (MIN. 99.0 %)**

- Na<sub>2</sub>HPO<sub>4</sub>
- M = 141.96 g/mol
- CAS no. 7558-79-4
- EC no. 231-448-7

**Specification**

- Colourless to white solid
- Melting point 250 °C
- Loss on drying max. 0.2 %
- Arsenic (As) max. 0.0001 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.01 %
- Lead (Pb) max. 0.0002 %
- Zinc (Zn) max. 0.0005 %
- Chloride (Cl) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.001 %
- pH (5 %, 25 °C) 8.7 – 9.3
- Insoluble matter max. 0.01 %
- Heavy metals (as Pb) max. 0.001 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1329.0500
1 kg	Plastic bottle	1329.1000
2.5 kg	Plastic bottle	1329.2500

## DI-SODIUM HYDROGEN PHOSPHATE DIHYDRATE P. A., DAB (MIN. 99.5 %)

- $\text{Na}_2\text{HPO}_4 \times 2 \text{H}_2\text{O}$
- M = 177.99 g/mol
- CAS no. 10028-24-7
- EC no. 231-448-7

### Specification

- White, crystalline powder
- Ammonium ( $\text{NH}_4$ ) max. 0.001 %
- Arsenic (As) max. 0.0001 %
- Iron (Fe) max. 0.0005 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Loss on drying 20.0 – 20.4 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8622.0500
1 kg	Plastic bottle	8622.1000
2.5 kg	Plastic bottle	8622.2500
5 kg	Plastic bottle	8622.5000

## DI-SODIUM HYDROGEN PHOSPHATE DODECAHYDRATE PURISS., DAB, PH. EUR., BP, PH. FRANÇ. (98.5 – 101.0 %)

- $\text{Na}_2\text{HPO}_4 \times 12 \text{H}_2\text{O}$
- M = 358.14 g/mol
- CAS no. 10039-32-4
- EC no. 231-448-7
- Density 1.52 g/cm<sup>3</sup>

### Specification

- Colourless solid
- pH (50 g/l  $\text{H}_2\text{O}$ ) 9.0 – 9.4
- Sodium dihydrogen phosphate ( $\text{NaH}_2\text{PO}_4$ ) max. 0.5 %
- Water 57.0 – 61.0 %
- Arsenic (As) max. 0.0001 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.005 %
- Lead (Pb) max. 0.001 %
- Zinc (Zn) max. 0.001 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Fluoride (F) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1310.1000
2.5 kg	Plastic bottle	1310.2500
5 kg	Plastic bottle	1310.5000

## SODIUM HYDROXIDE MICRO GRANULES P. A. (MIN. 98.8 %)

- NaOH
- M = 40.00 g/mol
- CAS no. 1310-73-2
- EC Index no. 011-002-00-6
- EC no. 215-185-5
- Density 2.3 g/cm<sup>3</sup>
- UN-No. 1823
- ADR 8, II

### GHS

- H314
- P260 P264 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P321 P363 P405 P501



### Specification

- White microgranules
- Melting point 324 °C
- Boiling point 1390 °C
- Sodium carbonate ( $\text{Na}_2\text{CO}_3$ ) max. 0.5 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0002 %
- Silicate ( $\text{SiO}_2$ ) max. 0.0001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %
- Aluminium (Al) max. 0.0006 %
- Cadmium (Cd) max. 0.00000035 %
- Magnesium (Mg) max. 0.00005 %
- Copper (Cu) max. 0.0000011 %
- Nickel (Ni) max. 0.0002 %
- Lead (Pb) max. 0.0000025 %
- Silver (Ag) max. 0.00005 %
- Calcium (Ca) max. 0.0002 %
- Iron (Fe) max. 0.00042 %
- Arsenic (As) max. 0.0001 %
- Sodium chloride (NaCl) max. 0.005 %
- Iron oxide ( $\text{Fe}_2\text{O}_3$ ) max. 0.002 %
- Mercury (Hg) max. 0.0001 %
- Chromium (Cr) max. 0.0004 %
- Selenium (Se) max. 0.0001 %
- Antimony (Sb) max. 0.00025 %
- Potassium (K) max. 0.036 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1355.1000
5 kg	Plastic bottle	1355.5000

**SODIUM HYDROXIDE SOLUTION**

- M = 40.00 g/mol
- UN-No. 1824
- ADR 8, III

**Specification**

- Colourless liquid

**SODIUM HYDROXIDE SOLUTION 0.1 MOL/L (0.1 N)**

- 4 g NaOH/l H<sub>2</sub>O = 0.1 N ( $\pm 0.0002/20$  °C)
- Density 1.01 g/ml

**Specification**

- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1331.1000
5 l	Polytainer	1331.5000
10 l	Polytainer	1331.9510

**SODIUM HYDROXIDE SOLUTION 0.1 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 N)**

- traceable to NIST

**Specification**

- Accuracy (20 °C)  $\pm 0.1$  %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1321.1011

**SODIUM HYDROXIDE SOLUTION 0.25 MOL/L (0.25 N)**

- 10 g NaOH/l H<sub>2</sub>O = 0.25 N ( $\pm 0.0005/20$  °C)
- Density 1.01 g/ml

**GHS**

- H290 H315 H319
- P280 P301+P330+P331  
P305+P351+P338 P308+P311

**Specification**

- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1333.1000

**SODIUM HYDROXIDE SOLUTION 0.5 MOL/L (0.5 N)**

- 20 g NaOH/l H<sub>2</sub>O = 0.5 N ( $\pm 0.001/20$  °C)
- Density 1.02 g/ml

**GHS**

- H290 H315 H319
- P280 P302+P352 P305+P351+P338  
P337+P313

**Specification**

- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1335.1000
5 l	Polytainer	1335.5000

## SODIUM HYDROXIDE SOLUTION 1.0 MOL/L (1.0 N)

- 40 g NaOH/L H<sub>2</sub>O = 1 N (±0.002/20 °C)
- Density 1.02 g/ml

### GHS

- H290 H314
- P234 P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P390 P501



### Specification

- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1340.1000
5 l	Polytainer	1340.5000
10 l	Polytainer	1340.9510

## SODIUM HYDROXIDE SOLUTION 1.0 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (1.0 N)

- traceable to NIST

### GHS

- H290 H314
- P234 P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P390 P501



### Specification

- Accuracy (20 °C) ±0.1 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1300.1011

## SODIUM HYDROXIDE SOLUTION 2.0 MOL/L (2.0 N)

- 80 g NaOH/L H<sub>2</sub>O = 2 N (±0.004/20 °C)
- Density (20 °C) 1.09 g/ml

### GHS

- H314
- P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P501



### Specification

- Melting point 0 °C
- Boiling point 100 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1350.1000

## SODIUM HYDROXIDE SOLUTION 15 % TECHNICAL GRADE (14.0 – 16.0 %)

### GHS

- H314
- P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P501



### Specification

- Colourless, almost clear liquid
- Sodium chloride (NaCl) max. 100 ppm
- Iron (Fe) max. 5 ppm

Quantity	Packaging material	Art. no.
11 kg	Plastic canister	1376.9010

**SODIUM HYDROXIDE SOLUTION 20 % PURE (19.5 – 20.5 %)**

- Density (20 °C) 1.213 – 1.225 g/ml

**GHS**

- H314
- P280 P290 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P501



**Specification**

- Assay (alkalimetric) 19.5 – 20.5 %
- Carbonate (CO<sub>2</sub>) max. 1.0 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1315.1000

**SODIUM HYDROXIDE SOLUTION 25 % W/W P.A. (24.8 – 25.2 %)**

- 320 g NaOH/l H<sub>2</sub>O
- Density (20 °C) 1.272 – 1.276 g/ml

**GHS**

- H290 H314
- P280 P301+P330+P331 P308+P311  
P501



Quantity	Packaging material	Art. no.
25 l	Plastic canister	1391.9025

**SODIUM HYDROXIDE SOLUTION 32 % W/W PURISS.**

- 432 g NaOH/l H<sub>2</sub>O
- Density 1.349 g/ml

**GHS**

- H314
- P260 P264 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P321 P363 P405  
P501



**Specification**

- Melting point 9 °C
- Sodium carbonate (Na<sub>2</sub>CO<sub>3</sub>) max. 1.0 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	1381.2511



## SODIUM HYDROXIDE SOLUTION 32 % W/W P. A.

- 432 g NaOH/l H<sub>2</sub>O
- Density 1.349 g/ml

### GHS

- H290 H314
- P260 P264 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P321 P363 P405  
P501



### Specification

- Melting point 9 °C
- Sodium carbonate (Na<sub>2</sub>CO<sub>3</sub>) max. 0.5 %
- Aluminium (Al) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Heavy metals (as Pb) max. 0.0002 %
- Chloride (Cl) max. 0.001 %
- Nitrogen (N) max. 0.0001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Sulphur (S) max. 0.0001 %
- Cyanide (CN) max. 0.0001 %
- Silicate (SiO<sub>2</sub>) max. 0.01 %
- Suitable for the nitrogen determination acc. to Kjeldahl

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	1390.2511
5 l	Plastic bottle	1390.5011
10 l	Plastic canister	1390.9010
20 l	Plastic canister	1390.9020
25 l	Plastic canister	1390.9025
1000 l	IBC	1390.91000

## SODIUM HYPOCHLORITE SOLUTION 47/50 % (6 - 14 % ACTIVE CHLORINE)

- M = 74.44 g/mol
- CAS no. 7681-52-9
- EC Index no. 017-011-00-1
- EC no. 231-668-3

- Density 1.22 g/ml
- UN-No. 1791
- ADR 8, II

### GHS

- H314 H400 EUH031
- P260 P273 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P405 P501



### Specification

- Yellowish liquid
- Melting point 0 °C
- Boiling point 100 °C
- Assay (active chlorine) ±13 %
- Storage at 2 – 15 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1305.1000
2.5 l	Plastic bottle	1305.2500

## SODIUM IODIDE PURISS., DAB, PH. EUR., BP, PH. FRANÇ., USP (99.0 - 100.5 %)

- NaI
- M = 149.89 g/mol
- CAS no. 7681-82-5
- EC no. 231-679-3

- Density 3.67 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

### GHS

- H372 H400
- P260 P273 P314 P501



### Specification

- Colourless to white solid
- Melting point 662 °C
- Boiling point 1304 °C
- Loss on drying max. 1 %
- Free alkali max. 0.01 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.05 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.03 %
- Iodate (IO<sub>3</sub>) max. 0.0002 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %
- Thiosulphate (S<sub>2</sub>O<sub>3</sub>) max. 0.005 %
- Nitrogen (N) max. 0.003 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1354.1000
25 kg	Fiber drum	1354.9025



### SODIUM MOLYBDATE DIHYDRATE P. A., PH. EUR., ACS (MIN. 99.5 %)

- $\text{Na}_2\text{MoO}_4 \times 2 \text{H}_2\text{O}$
- M = 241.95 g/mol
- CAS no. 10102-40-6
- EC no. 231-551-7
- Density 3.28 g/cm<sup>3</sup>

#### Specification

- Colourless to white solid
- Ammonium ( $\text{NH}_4$ ) max. 0.001 %
- Iron (Fe) max. 0.001 %
- Lead (Pb) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- pH (5 %, 25 °C) 7.0 – 10.5
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.0005 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1377.0100
1 kg	Plastic bottle	1377.1000

### SODIUM NITRATE P. A., ACS, PH. EUR., ISO (MIN. 99.5 %)

- $\text{NaNO}_3$
- M = 84.99 g/mol
- CAS no. 7631-99-4
- EC no. 231-554-3
- Density 2.26 g/cm<sup>3</sup>
- UN-No. 1498
- ADR 5.1, III

#### GHS

- H272 H319
- P210 P220 P221 P280 P305+P351+P338 P501



#### Specification

- White crystals
- Insoluble matter max. 0.005 %
- Chloride (Cl) max. 0.0005 %
- Iodate ( $\text{IO}_3$ ) max. 0.0005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.003 %
- Heavy metals (as Pb) max. 0.0005 %
- Calcium (Ca) max. 0.002 %
- Iron (Fe) max. 0.0002 %
- Magnesium (Mg) max. 0.001 %
- pH (5 %, 25 °C) 5.5 – 8.3
- Phosphate ( $\text{PO}_4$ ) max. 0.0002 %
- Nitrite ( $\text{NO}_2$ ) max. 0.001 %
- Ammonium ( $\text{NH}_4$ ) max. 0.002 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Potassium (K) max. 0.005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.0005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1309.0500
1 kg	Plastic bottle	1309.1000
25 kg	Fiber drum	1309.9025

### SODIUM NITRITE

- $\text{NaNO}_2$
- M = 69.00 g/mol
- CAS no. 7632-00-0
- EC Index no. 007-010-00-4
- EC no. 231-555-9
- Density 2.1 g/cm<sup>3</sup>
- UN-No. 1500
- ADR 5.1 (6.1), III

#### GHS

- H272 H301 H400
- P273



#### Specification

- Colourless to light yellow solid
- Melting point 280 °C
- Boiling point 320 °C

### SODIUM NITRITE PURE (MIN. 98.0 %)

#### Specification

- Heavy metals (as Pb) max. 0.005 %
- Chloride (Cl) max. 0.02 %
- Sulphate ( $\text{SO}_4$ ) max. 0.05 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1342.1000

## SODIUM NITRITE P. A., ACS, PH. EUR. (MIN. 99.0 %)

### Specification

- Calcium (Ca) max. 0.002 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Insoluble matter max. 0.01 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	1359.0100
500 g	Plastic bottle	1359.0500

## SODIUM NITROPRUSSIDE DIHYDRATE P. A. (SODIUM PENTACYANONITROSOFERRAT(III) DIHYDRATE)

- Na<sub>2</sub>[Fe(CN)<sub>5</sub>NO] x 2 H<sub>2</sub>O
- M = 297.95 g/mol
- CAS no. 13755-38-9
- EC no. 238-373-9
- Density 1.71 g/cm<sup>3</sup>
- UN-No. 1588
- ADR 6.1, II

### GHS

- H301
- P308+P311 P501



### Specification

- Red solid
- Insoluble matter max. 0.01 %
- Chloride (Cl) max. 0.02 %
- Potassium hexacyanoferrate(II) (K<sub>4</sub>[Fe(CN)<sub>6</sub>]) max. 0.02 %
- Potassium hexacyanoferrate(III) (K<sub>3</sub>[Fe(CN)<sub>6</sub>]) max. 0.01 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %

Quantity	Packaging material	Art. no.
25 g	Glass bottle	1389.0025
100 g	Glass bottle	1389.0100

## SODIUM PEROXODISULPHATE P. A., ACS, ISO (MIN. 99.0 %)

- Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub>
- M = 238.1 g/mol
- CAS no. 7775-27-1
- EC no. 231-892-1
- Density 1.15 g/cm<sup>3</sup>
- UN-No. 1505
- ADR 5.1 (6.1), III

### GHS

- H272 H302 H315 H317 H319 H334 H335
- P280 P302+P352 P304+P341 P305+P351+P338 P342+P311 P501



### Specification

- Colourless to white solid
- Melting point 100 °C (decomposition)
- Aluminium (Al) max. 0.001 %
- Iron (Fe) max. 0.002 %
- Heavy metals (as Pb) max. 0.002 %
- Chloride (Cl) max. 0.002 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Sulphate (SO<sub>4</sub>) max. 0.001 %
- Nitrogen (N) max. 0.003 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1383.1000



**TRI-SODIUM PHOSPHATE DODECAHYDRATE P. A., ACS, PH. EUR. (MIN. 99.0 %)**

- $\text{Na}_3\text{PO}_4 \times 12 \text{H}_2\text{O}$
- M = 380.18 g/mol
- CAS no. 10101-89-0
- EC no. 231-509-8
- Density (20 °C) 1.62 g/cm<sup>3</sup>

**GHS**

- H315 H319
- P302+P352 P305+P351+P338 P501

**Specification**

- Colourless solid
- Melting point 75 °C
- Free alkali max. 2.5 %
- Chloride (Cl) max. 0.0005 %
- Iron (Fe) max. 0.001 %
- Heavy metals (as Pb) max. 0.001 %
- Nitrogen (N) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Fluoride (F) max. 0.005 %
- Insoluble matter max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1348.1000
5 kg	Plastic bottle	1348.5000

**SODIUM POLYTUNGSTATE GRANULES (MIN. 92.0 %)**

- $3 \text{Na}_2\text{WO}_4 \times 9 \text{WO}_3 \times \text{H}_2\text{O}$
- M = 2986.13 g/mol
- CAS no. 12141-67-2
- EC Index no. 074-001-00-X
- EC no. 412-770-9
- Density (20 °C) ~5.47 g/cm<sup>3</sup>

**GHS**

- H302 H318 H412
- P261 P273 P280 P305+P351+P338 P501

**Specification**

- Appearance white granular
- Assay ( $\text{WO}_3$ , raw material) 92.0 – 94.0 %
- Grain size 1.6 – 5.6 mm
- pH (d = 2.80 g/ml) 2.5 – 3.5

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1339.1000

**SODIUM POLYTUNGSTATE SOLUTION (MIN. 92.0 %)**

- $3 \text{Na}_2\text{WO}_4 \times 9 \text{WO}_3 \times \text{H}_2\text{O}$
- M = 2986.13 g/mol
- CAS no. 12141-67-2
- EC Index no. 074-001-00-X
- EC no. 412-770-9
- Density (20 °C) 2.98–3.02 g/cm<sup>3</sup>

**GHS**

- H302 H318 H412
- P261 P273 P280 P305+P351+P338 P501

**Specification**

- Appearance colourless liquid
- Assay ( $\text{WO}_3$ , raw material) 92.0 – 94.0 %
- pH (d = 3.00 g/ml) 2.5 – 3.5

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1352.1000

**SODIUM PYROPHOSPHATE DECAHYDRATE P. A., ACS, PH. EUR. (MIN. 99.0 %)**

- $\text{Na}_4\text{P}_2\text{O}_7 \times 10 \text{H}_2\text{O}$
- M = 446.06 g/mol
- CAS no. 13472-36-1
- EC no. 231-767-1
- Density 1.820 g/cm<sup>3</sup>

**Specification**

- White solid
- Melting point 79.5 °C
- Potassium (K) max. 0.005 %
- Insoluble matter max. 0.01 %
- Chloride (Cl) max. 0.001 %
- Phosphate ( $\text{PO}_4$ ) max. 0.1 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- Nitrogen (N) max. 0.001 %
- Heavy metals (as Pb) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- pH (5 %, 25 °C) 9.5 – 10.5

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1382.0500
2.5 kg	Plastic bottle	1382.2500

## SODIUM SALICYLATE P. A., PH. EUR. (MIN. 99.5 %)

- $C_7H_5NaO_3$
- M = 160.11 g/mol
- CAS no. 54-21-7
- EC no. 200-198-0
- Density 0.32 g/cm<sup>3</sup>

### GHS

- H302 H319
- P260 P305+P351+P338



### Specification

- Colourless solid
- Melting point 200 °C
- Loss on drying max. 0.3 %
- Iron (Fe) max. 0.001 %
- Heavy metals (as Pb) max. 0.001 %
- Chloride (Cl) max. 0.002 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1394.0250
1 kg	Plastic bottle	1394.1000

## SODIUM SULPHATE ANHYDROUS P. A., ACS, ISO (MIN. 99.0 %)

- $Na_2SO_4$
- M = 142.04 g/mol
- CAS no. 7757-82-6
- EC no. 231-820-9
- Density 2.70 g/cm<sup>3</sup>

### Specification

- White, crystalline substance
- Melting point 884 °C
- Assay (acidimetric) min. 99.0 %
- Identity complies
- pH (5.0 % H<sub>2</sub>O) 5.2 – 9.2
- Loss on ignition max. 0.5 %
- Insoluble matter in water max. 100 ppm
- Total nitrogen (N) max. 5 ppm
- Chloride (Cl) max. 10 ppm
- Phosphate (PO<sub>4</sub>) max. 10 ppm
- Heavy metals (as Pb) max. 5 ppm
- Calcium (Ca) max. 100 ppm
- Iron (Fe) max. 10 ppm
- Potassium (K) max. 100 ppm
- Magnesium (Mg) max. 50 ppm

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1320.1000
5 kg	Plastic bucket	1320.5000

## SODIUM SULPHATE DECAHYDRATE P. A., ACS (MIN. 99.0 %)

- $Na_2SO_4 \times 10 H_2O$
- M = 322.19 g/mol
- CAS no. 7727-73-3
- EC no. 231-820-9
- Density 1.464 g/cm<sup>3</sup>

### Specification

- Colourless solid
- Melting point 32 °C
- Arsenic (As) max. 0.0005 %
- Calcium (Ca) max. 0.002 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.002 %
- Magnesium (Mg) max. 0.0005 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Phosphate (PO<sub>4</sub>) max. 0.0005 %
- Nitrogen (N) max. 0.0005 %
- pH (5 %, 25 °C) 5.2 – 9.2
- Insoluble matter max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1384.1000
5 kg	Plastic bottle	1384.5000

## SODIUM SULFITE ANYHRDOUS P. A., PH. EUR. (MIN. 98.0 %)

- $Na_2SO_3$
- M = 126.04 g/mol
- CAS no. 7757-83-7
- EC no. 231-821-4
- Density 2.63 g/cm<sup>3</sup>

### Specification

- Colourless to white solid
- Melting point >500 °C
- Arsenic (As) max. 0.00002 %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Zinc (Zn) max. 0.001 %
- Chloride (Cl) max. 0.005 %
- Thiosulphate (S<sub>2</sub>O<sub>3</sub>) max. 0.02 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1385.0500
1 kg	Plastic bottle	1385.1000
10 kg	Plastic bucket	1385.9010

**DI-SODIUM TARTRATE DIHYDRATE P. A., ACS (MIN. 99.5 %)**

- $\text{Na}_2\text{C}_4\text{H}_4\text{O}_6 \times 2 \text{H}_2\text{O}$
- M = 230.08 g/mol
- CAS no. 6106-24-7
- EC no. 212-773-3
- Density 1.82 g/cm<sup>3</sup>

**Specification**

- Colourless solid
- Melting point 57 °C
- Loss on drying 15.61 – 15.71 %
- Ammonium ( $\text{NH}_4$ ) max. 0.001 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.0005 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Phosphate ( $\text{PO}_4$ ) max. 0.0005 %
- Sulphate ( $\text{SO}_4$ ) max. 0.002 %
- pH (5 %, 25 °C) 7.0 – 9.0
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	1353.1000

**DI-SODIUM TETRABORATE DECAHYDRATE P. A., ACS (MIN. 99.5 %)**

- $\text{Na}_2\text{B}_4\text{O}_7 \times 10 \text{H}_2\text{O}$
- M = 381.37 g/mol
- CAS no. 1303-96-4
- EC Index no. 005-011-01-1
- EC no. 215-540-4
- Density 1.72 g/cm<sup>3</sup>

**GHS**

- H360FD
- P201 P202 P280 P308+P313 P405 P501

**Specification**

- White, crystalline powder
- Melting point ~75 °C
- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Phosphate ( $\text{PO}_4$ ) max. 0.001 %
- Sulphate ( $\text{SO}_4$ ) max. 0.005 %
- pH (0.01 M, 25 °C) 9.15 – 9.20
- Insoluble matter max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8614.0500
25 kg	Plastic drum	8614.9025

**SODIUM THIOSULPHATE ANHYDROUS (MIN. 98.0 %)**

- $\text{Na}_2\text{S}_2\text{O}_3$
- M = 158.11 g/mol
- CAS no. 7772-98-7
- EC no. 231-867-5
- Density 1.67 g/cm<sup>3</sup>

**Specification**

- Colourless to white solid
- Melting point 48 °C
- Boiling point 100 °C (decomposition)
- pH 6.0 – 8.5
- Sulphur (S) max. 0.002 %
- Heavy metals (as Pb) max. 0.005 %
- Iron (Fe) max. 0.005 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	1379.0250

**SODIUM THIOSULPHATE PENTAHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)**

- $\text{Na}_2\text{S}_2\text{O}_3 \times 5 \text{H}_2\text{O}$
- M = 248.21 g/mol
- CAS no. 10102-17-7
- EC no. 231-867-5
- Density 1.74 g/cm<sup>3</sup>

**Specification**

- Colourless to white solid
- Melting point 48 °C
- Calcium (Ca) max. 0.002 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.001 %
- Magnesium (Mg) max. 0.001 %
- Lead (Pb) max. 0.0005 %
- Chloride (Cl) max. 0.01 %
- Sulphate ( $\text{SO}_4$ ) max. 0.1 %
- Sulphur (S) max. 0.0001 %
- Nitrogen (N) max. 0.002 %
- pH (5 %, 25 °C) 5.5 – 7.5
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	1388.0500
1 kg	Plastic bottle	1388.1000

## SODIUM THIOSULPHATE SOLUTION

- M = 248.18 g/mol
- Density 1.00 g/ml

### Specification

- Colourless liquid
- Melting point 0 °C
- Boiling point 100 °C

### SODIUM THIOSULPHATE SOLUTION 0.01 MOL/L (0.01 N)

- 2.482 g Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> x 5 H<sub>2</sub>O/l H<sub>2</sub>O = 0.01 N  
(±0.00002/20 °C)

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1369.1000

### SODIUM THIOSULPHATE SOLUTION 0.1 MOL/L (0.1 N)

- 24.818 g Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> x 5 H<sub>2</sub>O/l H<sub>2</sub>O = 0.1 N  
(±0.0002/20 °C)

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1356.1000
5 l	Polytainer	1356.5000
10 l	Polytainer	1356.9510

### SODIUM THIOSULPHATE SOLUTION 0.1 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 N)

- traceable to NIST

### Specification

- Accuracy (20 °C) ±0.2 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	1312.1011

## SULPHURIC ACID

- M = 98.08 g/mol
- CAS no. 7664-93-9
- EC Index no. 016-020-00-8
- EC no. 231-639-5

### SULPHURIC ACID 0.05 MOL/L (0.1 N)

- 4.905 g H<sub>2</sub>SO<sub>4</sub>/l H<sub>2</sub>O = 0.1 N  
(±0.0002/20 °C)
- Density 1.01 g/ml
- UN-No. 3264
- ADR 8, III

### GHS

- H290 H315 H319
- P280 P305+P351+P338



### Specification

- Colourless liquid

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	815.1000
5 l	Polytainer	815.5000

**SULPHURIC ACID 0.5 MOL/L (1.0 N)**

- 49.04 g H<sub>2</sub>SO<sub>4</sub>/l H<sub>2</sub>O = 1.0 N  
(±0.002/20 °C)

- Density 1.03 g/ml
- UN-No. 3264
- ADR 8, III

**GHS**

- H314
- P280 P303+P361+P353 P501



**Specification**

- Colourless liquid

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	855.1000
5 l	Polytainer	855.5000
10 l	Polytainer	855.9510

**SULPHURIC ACID P.A., FCC (MIN. 25.0 % W/W)**

- 295 g H<sub>2</sub>SO<sub>4</sub>/l H<sub>2</sub>O

- Density 1.18 g/ml
- UN-No. 2796
- ADR 8, II

**GHS**

- H290 H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P405 P501



**Specification**

- Colourless liquid
- Boiling point ~103 °C

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	884.1011

**SULPHURIC ACID 62 % W/W**

- 942 g H<sub>2</sub>SO<sub>4</sub>/l H<sub>2</sub>O

- Density 1.52 g/ml
- UN-No. 1830
- ADR 8, II

**GHS**

- H290 H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390 P405 P501



**Specification**

- Colourless liquid

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	831.2500



## SULPHURIC ACID PURISS., FCC (MIN. 95.0 %)

- H<sub>2</sub>SO<sub>4</sub>
- Density 1.84 g/ml
- UN-No. 1830
- ADR 8, II

### GHS

- H290 H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390 P405 P501



### Specification

- Colourless liquid
- Boiling point 330 °C
- Assay 95.0 – 97.0 %
- Residue on ignition max. 0.0002 %
- Arsenic (As) max. 0.00001 %
- Iron (Fe) max. 0.0002 %
- Heavy metals (as Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0001 %

- Nitrate (NO<sub>3</sub>) max. 0.0005 %
- Reducing substances max. 0.0002 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	874.1000
2.5 l	Glass bottle	874.2500
5 l	Plastic bottle	874.5000
25 l	Plastic canister	874.9025

## SULPHURIC ACID P. A. (MIN. 95.0 %)

- H<sub>2</sub>SO<sub>4</sub>
- Density 1.84 g/ml
- UN-No. 1830
- ADR 8, II

### GHS

- H290 H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390 P405 P501



### Specification

- Colourless liquid
- Melting point -15 °C
- Boiling point 330 °C
- Chloride (Cl) max. 0.000005 %
- Nitrate (NO<sub>3</sub>) max. 0.00002 %
- Reducing substances max. 0.0002 %
- Residue on ignition max. 0.005 %
- Ammonium (NH<sub>4</sub>) max. 0.001 %
- Arsenic (As) max. 0.000003 %
- Selenium (Se) max. 0.0003 %
- Cadmium (Cd) max. 0.00001 %
- Copper (Cu) max. 0.00001 %
- Iron (Fe) max. 0.00002 %
- Lead (Pb) max. 0.00001 %
- Zinc (Zn) max. 0.00005 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	859.1000
2.5 l	Glass bottle	859.2500

## SULPHURIC ACID P. A. (MIN. 97.0 %)

- H<sub>2</sub>SO<sub>4</sub>
- Density 1.84 g/ml
- UN-No. 1830
- ADR 8, II

### GHS

- H290 H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390 P405 P501



### Specification

- Colourless liquid
- Melting point ~3 °C
- Boiling point ~335 °C
- Residue on ignition max. 2 ppm
- Nitrogen (N) max. 1 ppm
- Suitable for the nitrogen determination acc. to Kjeldahl

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	822.2500



**SULPHURIC ACID SUPERPURE FOR TRACE ANALYSIS (93.0 – 98.0 % W/W)**

- H<sub>2</sub>SO<sub>4</sub>
- UN-No. 1830
- ADR 8, II

**GHS**

- H290 H314
- P260 P280 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P310 P390 P405 P501



**Specification**

- Colourless liquid
- Colour (APHA) max. 10
- Chloride (Cl) max. 0.7 ppm
- Nitrate (NO<sub>3</sub>) max. 0.2 ppm
- Total phosphorus (P) max. 0.05 ppm
- Substances reducing KMnO<sub>4</sub> max. 20 ppm
- Aluminium (Al) max. 1 ppb
- Antimony (Sb) max. 1 ppb
- Arsenic (As) max. 0.5 ppb
- Barium (Ba) max. 0.1 ppb
- Beryllium (Be) max. 0.1 ppb
- Bismuth (Bi) max. 0.1 ppb
- Cadmium (Cd) max. 0.5 ppb
- Calcium (Ca) max. 1 ppb
- Cerium (Ce) max. 0.1 ppb
- Caesium (Cs) max. 0.1 ppb
- Chromium (Cr) max. 0.5 ppb
- Cobalt (Co) max. 0.5 ppb
- Copper (Cu) max. 0.5 ppb
- Dysprosium (Dy) max. 0.1 ppb
- Erbium (Er) max. 0.1 ppb
- Europium (Eu) max. 0.1 ppb
- Gadolinium (Gd) max. 0.1 ppb
- Gallium (Ga) max. 0.1 ppb
- Germanium (Ge) max. 1 ppb
- Gold (Au) max. 0.5 ppb
- Hafnium (Hf) max. 0.1 ppb
- Holmium (Ho) max. 0.1 ppb
- Indium (In) max. 0.1 ppb
- Iron (Fe) max. 1 ppb
- Lanthanum (La) max. 0.1 ppb
- Lead (Pb) max. 0.1 ppb
- Lithium (Li) max. 0.5 ppb
- Lutetium (Lu) max. 0.1 ppb
- Magnesium (Mg) max. 1 ppb
- Manganese (Mn) max. 0.5 ppb
- Mercury (Hg) max. 0.1 ppb
- Molybdenum (Mo) max. 0.5 ppb
- Neodymium (Nd) max. 0.1 ppb
- Nickel (Ni) max. 0.5 ppb
- Niobium (Nb) max. 0.1 ppb
- Potassium (K) max. 1 ppb
- Praseodymium (Pr) max. 0.1 ppb
- Rhenium (Re) max. 0.5 ppb
- Rhodium (Rh) max. 0.5 ppb
- Rubidium (Rb) max. 0.5 ppb
- Samarium (Sm) max. 0.1 ppb
- Scandium (Sc) max. 0.1 ppb
- Selenium (Se) max. 10 ppb
- Silver (Ag) max. 1 ppb
- Sodium (Na) max. 1 ppb
- Strontium (Sr) max. 0.5 ppb
- Tellurium (Te) max. 0.1 ppb
- Terbium (Tb) max. 0.1 ppb
- Thallium (Tl) max. 0.1 ppb
- Thorium (Th) max. 0.1 ppb
- Thulium (Tm) max. 0.1 ppb
- Tin (Sn) max. 1 ppb
- Titanium (Ti) max. 1 ppb
- Tungsten (W) max. 0.5 ppb
- Uranium (U) max. 0.1 ppb
- Vanadium (V) max. 0.5 ppb
- Ytterbium (Yb) max. 0.1 ppb
- Yttrium (Y) max. 0.1 ppb
- Zinc (Zn) max. 1 ppb
- Zirconium (Zr) max. 0.5 ppb

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	863.1011



## SULPHURIC ACID VLSI (95.0 – 98.0 % W/W)

- H<sub>2</sub>SO<sub>4</sub>
- Density 1.84 g/ml
- UN-No. 1830
- ADR 8, II

### Specification

- Clear liquid
- Melting point 10 °C
- Boiling point 290 °C
- Colour (APHA) max. 10
- Residue on ignition max. 0.0003 %
- Chloride (Cl) max. 0.00001 %
- Nitrate (NO<sub>3</sub>) max. 0.00002 %
- Phosphate (PO<sub>4</sub>) max. 0.00003 %
- Silver (Ag) max. 10 ppb
- Aluminium (Al) max. 50 ppb
- Arsenic (As) max. 10 ppb
- Gold (Au) max. 10 ppb
- Boron (B) max. 20 ppb
- Barium (Ba) max. 10 ppb
- Beryllium (Be) max. 10 ppb
- Bismuth (Bi) max. 20 ppb
- Calcium (Ca) max. 50 ppb
- Cadmium (Cd) max. 10 ppb
- Cobalt (Co) max. 10 ppb
- Chromium (Cr) max. 10 ppb
- Copper (Cu) max. 10 ppb
- Iron (Fe) max. 50 ppb
- Gallium (Ga) max. 10 ppb
- Germanium (Ge) max. 10 ppb
- Potassium (K) max. 50 ppb
- Lithium (Li) max. 10 ppb
- Magnesium (Mg) max. 20 ppb
- Manganese (Mn) max. 10 ppb
- Sodium (Na) max. 50 ppb
- Nickel (Ni) max. 10 ppb

### GHS

- H290 H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P390 P405 P501



- Lead (Pb) max. 10 ppb
- Antimony (Sb) max. 10 ppb
- Silicon (Si) max. 30 ppb
- Tin (Sn) max. 20 ppb
- Strontium (Sr) max. 20 ppb
- Tantalum (Ta) max. 20 ppb
- Titanium (Ti) max. 20 ppb
- Thallium (Tl) max. 20 ppb
- Vanadium (V) max. 10 ppb
- Zinc (Zn) max. 20 ppb
- Zirconium (Zr) max. 10 ppb
- Particle count >0.5 µm max. 80 P/ml
- Particle count >1.0 µm max. 10 P/ml
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
2.5 l	Plastic bottle	829.2500

## TETRACHLOROETHYLENE PURISS. (MIN. 99.0 %)

- C<sub>2</sub>Cl<sub>4</sub>
- M = 165.93 g/mol
- CAS no. 127-18-4
- EC Index no. 602-028-00-4
- EC no. 204-825-9
- Density 1.623 g/ml
- UN-No. 1897
- ADR 6.1, III

### GHS

- H315 H317 H319 H336 H351 H411
- P261 P271 P280 P303+P351 P353  
P304+P340 P305+P355+P338  
P403+P233 P501



### Specification

- Colourless liquid
- Melting point -22 °C
- Boiling point 121.1 °C
- Identity (IR) complies
- Water max. 0.01 %
- Acidity max. 0.0005 meq/g
- Non-volatile substances max. 0.0005 %

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	710.2500

**TETRAHYDROFURAN**

- C<sub>4</sub>H<sub>8</sub>O
- M = 72.11 g/mol
- CAS no. 109-99-9
- EC Index no. 603-025-00-0
- EC no. 203-726-8
- UN-No. 2056
- ADR 3, II

**GHS**

- H225 H319 H335 H351 EUH019
- P201 P210 P241 P243 P261 P280 P308+P313 P403+P233

**Specification**

- Clear, colourless liquid
- Melting point -108 °C
- Boiling point 64 – 66 °C

**TETRAHYDROFURAN PURISS. (MIN. 99.9 % (STAB.))****Specification**

- Identity (IR) complies
- Refractive index (20 °C) 1.405 – 1.409
- Water (KF) max. 200 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 50 mg/kg
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 100 mg/kg
- Colour (Hazen) max. 10
- Density (d 20/4) 0.884 – 0.894
- Stabilized with ionol 200 – 400 mg/kg

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	741.2500
25 l	Plastic canister	741.9025

**TETRAHYDROFURAN P. A., ACS, PH. EUR. (MIN. 99.9 % (STAB.))**

- Density 0.89 g/ml

**Specification**

- Non-volatile substances max. 0.001 %
- Water max. 0.05 %
- Free acid max. 0.001 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.00005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) max. 0.005 %
- Colour (APHA) max. 20
- Residue on evaporation max. 0.03 %
- Stabilized with BHT max. 250 ppm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	728.1000
2.5 l	Glass bottle	728.2500

**TETRAHYDROFURAN ANHYDROUS P. A. (MIN. 99.9 % (STAB.))****Specification**

- Identity (IR) complies
- Refractive index (20 °C) 1.405 – 1.409
- Water (KF) max. 100 mg/kg
- Colour (Hazen) max. 10
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 20 mg/kg
- Density (d 20/4) 0.884 – 0.894
- Stabilized with ionol 200 – 400 mg/kg

Quantity	Packaging material	Art. no.
1 l	Glass bottle	775.1000

**TETRAHYDROFURAN FOR HPLC (MIN. 99.9 % (UNSTAB.))****Specification**

- Refractive index (20 °C) 1.405 – 1.409
- Water (KF) max. 200 mg/kg
- Non-volatile substances max. 5 mg/kg
- Free acids (as CH<sub>3</sub>COOH) max. 20 mg/kg
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 300 mg/kg
- UV transmittance at 240 nm min. 20.0 %
- UV transmittance at 250 nm min. 45.0 %
- UV transmittance at 300 nm min. 90.0 %
- UV transmittance at 320 nm min. 95.0 %
- Colour (Hazen) max. 10
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	797.1000
2.5 l	Glass bottle	797.2500

## TETRAHYDROFURAN FOR UHPLC-MS (MIN. 99.9 % (UNSTAB.))

- Density 0.89 g/ml

### Specification

- Assay (GC, on anhydrous basis) 99.9 – 100 %
- Water (KF) max. 0.02 % w/w
- Residue on evaporation max. 0.0001 % w/w
- LC-MS suitability test (reserpine) max. 50 ppb
- Absorption at 220 nm max. 0.55 AU
- Absorption at 235 nm max. 0.40 AU
- Absorption at 245 nm max. 0.26 AU
- Absorption at 255 nm max. 0.15 AU
- Absorption at 275 nm max. 0.05 AU
- Absorption at 285 nm max. 0.02 AU
- Absorption at 315 nm max. 0.01 AU
- Fluorescence (as quinine) at 254 nm max. 1.0 ppb
- Fluorescence (as quinine) at 365 nm max. 1.0 ppb
- Gradient test at 254 nm max. 10 mAU
- Gradient test at 280 nm max. 5 mAU
- Peroxides (as H<sub>2</sub>O<sub>2</sub>) max. 0.01 %
- Acidity max. 0.004 meq/g
- Alkalinity max. 0.0004 meq/g
- Aluminium (Al) max. 20 ppb
- Calcium (Ca) max. 50 ppb
- Iron (Fe) max. 20 ppb
- Potassium (K) max. 50 ppb
- Magnesium (Mg) max. 20 ppb
- Sodium (Na) max. 100 ppb
- Lead (Pb) max. 20 ppb
- Filtered through 0.2 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
1 l	Glass bottle	790.1000
2.5 l	Glass bottle	790.2500

## N,N,N',N'-TETRAMETHYLETHYLENDIAMINE (TEMED) FOR BIOCHEMISTRY (MIN. 99.0 %)

- C<sub>6</sub>H<sub>16</sub>N<sub>2</sub>
- M = 116.21 g/mol
- CAS no. 110-18-9
- EC Index no. 612-103-00-3
- EC no. 203-774-6
- UN-No. 2372
- ADR 3, II

### GHS

- H225 H302+H332 H314
- P210 P260 P280 P301+P330+P331 P305+P351+P338 P310 P403+P233 P501



### Specification

- Storage 2 – 8 °C
- Boiling point 121 °C
- Identity complies
- Water (KF) max. 1.0 %
- Refractive index (20 °C) 1.417

Quantity	Packaging material	Art. no.
100 ml	Glass bottle	8072.0100

## TIN(II) CHLORIDE DIHYDRATE P. A. (MIN. 98.0 %)

- SnCl<sub>2</sub> x 2 H<sub>2</sub>O
- M = 225.63 g/mol
- CAS no. 10025-69-1
- EC no. 231-868-0
- Density 2.71 g/cm<sup>3</sup>
- UN-No. 3260
- ADR 8, III

### GHS

- H302 H314
- P280 P305+P351+P338 P501



### Specification

- Colourless solid
- Melting point 38 °C
- Boiling point 652 °C (anhydrous)
- Insoluble matter max. 0.005 %
- Ammonium (NH<sub>4</sub>) max. 0.002 %
- Arsenic (As) max. 0.0001 %
- Calcium (Ca) max. 0.005 %
- Copper (Cu) max. 0.001 %
- Iron (Fe) max. 0.002 %
- Mercury (Hg) max. 0.000001 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Manganese (Mn) max. 0.0005 %
- Sodium (Na) max. 0.005 %
- Nickel (Ni) max. 0.0005 %
- Lead (Pb) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.002 %
- Suitable for AAS

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	133.0100
250 g	Plastic bottle	133.0250

**TOLUENE**

- C<sub>6</sub>H<sub>5</sub>CH<sub>3</sub>
- M = 92.14 g/mol
- CAS no. 108-88-3
- EC Index no. 601-021-00-3
- EC no. 203-625-9

- UN-No. 1294
- ADR 3, II

**GHS**

- H225 H304 H315 H336 H361d H373
- P201 P210 P241 P243 P260 P271  
P281 P301+P310 P303+P361+P353  
P304+P340 P308+P313 P331  
P403+P233 P501



**Specification**

- Clear, colourless liquid
- Melting point -95 °C
- Boiling point 110 – 111 °C

**TOLUENE PURISS. (MIN. 99.7 %)**

- Density 0.87 g/ml

**Specification**

- Non-volatile substances max. 0.001 %
- Water max. 0.05 %
- Thiophene (C<sub>4</sub>H<sub>4</sub>S) max. 0.0005 %

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	733.2500

**TOLUENE P. A., ACS, ISO, PH. EUR. (MIN. 99.9 %)**

- Density 0.865 – 0.869 g/ml

**Specification**

- Non-volatile substances max. 0.001 %
- Water max. 0.02 %
- Free acid max. 0.001 %
- Free alkali max. 0.001 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000001 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000005 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Sulphur (S) max. 0.003 %
- Thiophene (C<sub>4</sub>H<sub>4</sub>S) max. 0.0001 %
- Residue on evaporation max. 0.001 %
- Readily carbonisable substances complies
- Colour (APHA) max. 10
- Substances darkened by H<sub>2</sub>SO<sub>4</sub> complies

Quantity	Packaging material	Art. no.
1 l	Glass bottle	752.1000
2.5 l	Glass bottle	752.2500
25 l	Plastic canister	752.8025
25 l	Metal drum	752.9025
200 l	Metal drum	752.9200

**TOLUENE FOR RESIDUE ANALYSIS (MIN. 99.8 %)**

**Specification**

- Colour (Hazen) max. 10
- Refractive index (20 °C) 1.494 – 1.498
- Non-volatile substances max. 5 mg/kg
- Water (KF) max. 100 mg/kg
- Free acids (as HCl) max. 10 mg/kg
- GC-ECD: Peak (lindane) (Retention range trichlorobenzene to mirex) max. 3 ng/l
- GC-NPD: Peak (ethylparathion) (Retention range atrazin to coumaphos) max. 3 ng/l

Quantity	Packaging material	Art. no.
1 l	Glass bottle	715.1000
2.5 l	Glass bottle	715.2500

## TOLUENE FOR PESTICIDE ANALYSIS (MIN. 99.8 %)

### Specification

- Identity complies
- Colour (Hazen) max. 10
- Non-volatile substances max. 5 ppm
- Water max. 100 ppm
- Acidity (HCl) max. 10 ppm
- GC-ECD: Peak (lindane) max. 3 ng/l
- GC-NPD: Peak (ethylparathion) max. 3 ng/l

Quantity	Packaging material	Art. no.
2.5 l	Glass bottle	739.2500

## TRIETHYLAMINE PURISS. (MIN. 99.0 %)

- $C_6H_{15}N$
- M = 101.19 g/mol
- CAS no. 121-44-8
- EC Index no. 612-004-00-5
- EC no. 204-469-4
- Density 0.73 g/ml
- UN-No. 1296
- ADR 3 (8), II

### GHS

- H225 H302+H312+H332 H314 H335
- P210 P260 P280 P301+P330+P331 P303+P361+P353 P305+P351+P338 P310 P403+P233 P501



### Specification

- Colourless liquid
- Melting point – 115 °C
- Boiling point 90 °C
- pH (100 g/l  $H_2O$ ) 12.7
- Water max. 0.1 %
- Diethylamine ( $C_4H_{11}N$ ) max. 0.1 %
- Ethanol ( $C_2H_5OH$ ) max. 0.05 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	760.1000

## TRIFLUOROACETIC ANHYDRIDE P. A. (TFAA) (MIN. 98.0 %)

- $(CF_3CO)_2O$
- M = 210.04 g/mol
- CAS no. 407-25-0
- EC no. 206-982-9
- Density (20 °C) 1.511 – 1.515 g/cm<sup>3</sup>
- UN-No. 3265
- ADR 8, I

### GHS

- H301 H314 H332 H335 H412 EUH014
- P260 P273 P280 P301+P310 P301+P330+P331 P303+P361+P353 P304+P340 P305+P351+P338 P403+P233 P501



### Specification

- Clear, colourless liquid
- Melting point -65 °C
- Boiling point 40 °C
- Identity complies
- Residue on evaporation max. 10 ppm

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	782.0500



**TRIS FOR MOLECULAR BIOLOGY (MIN. 99.9 %)**

- $C_4H_{11}NO_3$
- M = 121.14 g/mol
- CAS no. 77-86-1
- EC no. 201-064-4
- Density 1.353 g/cm<sup>3</sup>

**GHS**

- H315 H319
- P280 P302+P352 P305+P351+P338

**Specification**

- White, crystalline powder
- Melting point 168 – 173 °C
- pH (1 M H<sub>2</sub>O, 20 °C) 10.5 – 11.5
- UV absorbance at 260 nm (40 % H<sub>2</sub>O) max. 0.03
- UV absorbance at 280 nm (40 % H<sub>2</sub>O) max. 0.02
- Loss on drying (105 °C, 3 h) max. 0.2 %
- Copper (Cu) max. 0.0001 %
- Iron (Fe) max. 0.0001 %
- Lead (Pb) max. 0.0001 %
- DNase, RNase, Protease not detectable
- UV absorbance at 430 nm (40 % H<sub>2</sub>O) max. 0.004

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8085.0500
1 kg	Plastic bottle	8085.1000

**WATER**

- H<sub>2</sub>O
- M = 18.02 g/mol
- CAS no. 7732-18-5
- EC no. 231-791-2
- Density 1.00 g/ml

**Specification**

- Clear, colourless liquid
- Melting point 0 °C
- Boiling point 100 °C

**WATER, COMPARABLE TO BIDEST****Specification**

- Produced by ion exchanger with downstream ultrapure water cartridge, UV torch and subsequent pressure filtration (0.2 µm)
- Conductivity ( during filling) max. 0.1 µS/cm
- Not tested for sterility

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	480.1000
5 l	Plastic canister	480.5000
10 l	Plastic canister	480.9010
20 l	Plastic canister	480.9020

**WATER, DEIONISED****Specification**

- Conductance (25 °C) 1 µS/cm
- pH 5.0 – 7.0
- Ammonium (NH<sub>4</sub>) complies
- Calcium (Ca) complies
- Carbon dioxide (CO<sub>2</sub>) complies
- Chloride (Cl) complies
- Sulphate (SO<sub>4</sub>) complies
- Oxidizing substances complies
- Fluoride (F) max. 0.5 ppm
- Total organic carbon (TOC) max. 500 ppb
- Non-sterile

Quantity	Packaging material	Art. no.
5 l	Plastic canister	464.5000

## WATER P. A. (CONFORM TO EN ISO 3696)

### Specification

- pH (25 °C) 5.0 – 7.0
- Conductivity (during production) max. 0.1 µS/cm
- Residue on evaporation max. 1 ppm
- Oxidizing substances (O) max. 0.4 mg/l
- Chloride (Cl) max. 0.1 ppm
- Phosphate (PO<sub>4</sub>) max. 0.1 ppm
- Nitrate (NO<sub>3</sub>) max. 0.1 ppm
- Sulphate (SO<sub>4</sub>) max. 0.1 ppm
- Silver (Ag) max. 0.01 ppm
- Arsenic (As) max. 0.01 ppm
- Gold (Au) max. 0.01 ppm
- Boron (B) max. 0.01 ppm
- Barium (Ba) max. 0.01 ppm
- Beryllium (Be) max. 0.01 ppm
- Bismuth (Bi) max. 0.01 ppm
- Calcium (Ca) max. 0.01 ppm
- Cadmium (Cd) max. 0.01 ppm
- Cobalt (Co) max. 0.01 ppm
- Chromium (Cr) max. 0.01 ppm
- Copper (Cu) max. 0.01 ppm
- Iron (Fe) max. 0.01 ppm
- Indium (In) max. 0.01 ppm
- Potassium (K) max. 0.01 ppm
- Lithium (Li) max. 0.01 ppm
- Magnesium (Mg) max. 0.01 ppm
- Molybdenum (Mo) max. 0.01 ppm
- Sodium (Na) max. 0.1 ppm
- Nickel (Ni) max. 0.01 ppm
- Lead (Pb) max. 0.01 ppm
- Silicon (Si) max. 0.01 ppm
- Tin (Sn) max. 0.01 ppm
- Strontium (Sr) max. 0.01 ppm
- Thallium (Tl) max. 0.01 ppm
- Vanadium (V) max. 0.01 ppm
- Zinc (Zn) max. 0.01 ppm
- Zirconium (Zr) max. 0.01 ppm

Quantity	Packaging material	Art. no.
5 l	Plastic canister	469.5000
10 l	Polytainer	469.9010

## WATER FOR HPLC

### Specification

- HPLC gradient test complies
- HPLC gradient (peak) at 210 nm max. 5 mAU
- HPLC gradient (peak) at 254 nm max. 0.5 mAU
- Conductivity max. 0.1 µS/cm
- Total organic carbon (TOC) max. 3 ppb
- Filtered through 0.1 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	418.1000
2.5 l	Glass bottle	418.2500

## WATER FOR LC-MS

### Specification

- HPLC gradient test complies
- HPLC gradient (peak) at 210 nm max. 5 mAU
- HPLC gradient (peak) at 254 nm max. 1 mAU
- Residue on evaporation max. 1 mg/kg
- Total organic carbon (TOC) max. 100 ppb
- Aluminium (Al) max. 0.000005 %
- Iron (Fe) max. 0.000005 %
- Calcium (Ca) max. 0.000005 %
- Magnesium (Mg) max. 0.000005 %
- Sodium (Na) max. 0.00001 %
- Potassium (K) max. 0.000005 %
- Sensitive impurities (reserpine) max. 100 ppb
- Conductivity max. 0.1 µS/cm
- Filtered through 0.2 µm

Quantity	Packaging material	Art. no.
1 l	Glass bottle	455.1000
2.5 l	Glass bottle	455.2500

## WATER FOR UHPLC-MS

### Specification

- Residue on evaporation max. 0.0001 % w/w
- LC-MS suitability test (reserpine) max. 30 ppb
- Fluorescence (as quinine) at 254 nm max. 0.30 ppb
- Fluorescence (as quinine) at 365 nm max. 0.30 ppb
- Gradient test at 210 nm max. 1 mAU
- Gradient test at 254 nm max. 0.5 mAU
- Total organic carbon (TOC) max. 10 ppb
- Acidity max. 0.00004 meq/g
- Alkalinity max. 0.00004 meq/g
- Aluminium (Al) max. 20 ppb
- Calcium (Ca) max. 50 ppb
- Iron (Fe) max. 20 ppb
- Potassium (K) max. 50 ppb
- Magnesium (Mg) max. 20 ppb
- Sodium (Na) max. 100 ppb
- Lead (Pb) max. 20 ppb
- Resistance 18.2 – 30 MΩcm
- Filtered through 0.1 µm
- Filled under inert gas

Quantity	Packaging material	Art. no.
1 l	Glass bottle	470.1000
2.5 l	Glass bottle	470.2500



**WATER LC-MS WITH 0.1 % V/V FORMIC ACID****Specification**

- Clear, colourless liquid
- Colour (APHA) max. 10
- Acidity (as HCOOH) 0.095 – 0.105 %
- HPLC gradient (peak) at 210 nm max. 50 mAU
- HPLC gradient (peak) at 254 nm max. 10 mAU
- UV transmittance at 210 nm min. 5.0 %
- UV transmittance at 230 nm min. 45.0 %
- UV transmittance at 254 nm min. 99.0 %
- pH (20 °C) 2.6 – 2.8
- Sensitive impurities (reserpine) max. 50 ppb
- Aluminium (Al) max. 20 ppb
- Iron (Fe) max. 30 ppb
- Calcium (Ca) max. 50 ppb
- Magnesium (Mg) max. 20 ppb
- Sodium (Na) max. 100 ppb
- Potassium (K) max. 50 ppb

Quantity	Packaging material	Art. no.
1 l	Glass bottle	456.1000
2.5 l	Glass bottle	456.2500

**WIJS SOLUTION FOR DETERMINATION OF THE IODINE NUMBER (0.2 N)**

- 16.24 g ICl<sub>2</sub>/l CH<sub>3</sub>COOH 100 % = 0.2 N (±0.004/20 °C)
- Density 1.06 g/ml
- UN-No. 2789
- ADR 8 (3), II
- GHS**
- H226 H290 H314
- P210 P233 P260 P280 P301+P330+P331 P303+P361+P353 P305+P351+P338 P310 P390 P403+P235 P501

**Specification**

- Brown liquid
- Insoluble matter max. 0.005 %

Quantity	Packaging material	Art. no.
1 l	Glass bottle	1810.1000

**XYLENE**

- C<sub>8</sub>H<sub>10</sub>
- M = 106.17 g/mol
- CAS no. 1330-20-7
- EC Index no. 601-022-00-9
- EC no. 215-535-7
- Density (20 °C) 0.860 – 0.872 g/ml
- UN-No. 1307
- ADR 3, III
- GHS**
- H226 H304+H332 H315 H319 H335 H373
- P210 P233 P241 P242 P243 P260 P280 P301+P310 P303+P353+P361 P304+P340 P305+P351+P338 P314 P331 P332+13 P370+P378 P403+P235 P501

**Specification**

- Clear, colourless liquid
- Boiling point 136.5 – 140.5 °C

**XYLENE TECHNICAL GRADE (MIN. 98.5 %)****Specification**

- Mixture of isomers
- Identity (IR) complies
- Refractive index (20 °C) 1.4917 – 1.5017
- Residue on evaporation max. 100 ppm
- Water (KF) max. 200 ppm
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 50 ppm
- Total sulphur (S) max. 100 ppm

Quantity	Packaging material	Art. no.
5 l	Plastic canister	371.5000

## XYLENE P. A., ACS, ISO, PH. EUR. (MIN. 99.0 %)

- Density (20 °C) 0.860 – 0.870 g/ml

### Specification

- Melting point -34 °C
- Mixture of isomers
- Non-volatile substances max. 0.001 %
- Water max. 0.01 %
- Free acid max. 0.0005 %
- Free alkali max. 0.0005 %
- Aluminium (Al) max. 0.00005 %
- Boron (B) max. 0.000002 %
- Barium (Ba) max. 0.00001 %
- Calcium (Ca) max. 0.00005 %
- Cadmium (Cd) max. 0.000002 %
- Cobalt (Co) max. 0.000002 %
- Chromium (Cr) max. 0.000002 %
- Copper (Cu) max. 0.000002 %
- Iron (Fe) max. 0.00001 %
- Magnesium (Mg) max. 0.00001 %
- Manganese (Mn) max. 0.000002 %
- Nickel (Ni) max. 0.000002 %
- Lead (Pb) max. 0.00001 %
- Tin (Sn) max. 0.00001 %
- Zinc (Zn) max. 0.00001 %
- Benzene (C<sub>6</sub>H<sub>6</sub>) max. 0.1 %
- Sulphur (S) max. 0.003 %
- Thiophene (C<sub>4</sub>H<sub>4</sub>S) max. 0.0001 %
- Toluene (C<sub>6</sub>H<sub>5</sub>CH<sub>3</sub>) max. 0.1 %
- Residue on evaporation max. 0.002 %
- Readily carbonisable substances complies
- Substances darkened by H<sub>2</sub>SO<sub>4</sub> complies
- Colour (APHA) max. 10

Quantity	Packaging material	Art. no.
1 l	Glass bottle	326.1000
2.5 l	Glass bottle	326.2500
5 l	Plastic canister	326.5000
10 l	Plastic canister	326.9010
25 l	Metal drum	326.9025

## XYLENE SUBSTITUTE, ODOURLESS

- Density 0.756 – 0.791 g/ml
- UN-No. 3295
- ADR 3, III

### GHS

- H226 H304 H336
- P210 P241 P243 P261 P271 P280
- P301+P310 P303+P361+P353
- P304+P340 P312 P370+P378
- P403+P433 P405 P501



### Specification

- Clear, colourless liquid
- Boiling point ~130 °C
- Refractive index (20 °C) 1.4250 – 1.4360

Quantity	Packaging material	Art. no.
1 l	Tinplate canister	320.1000
5 l	Plastic canister	320.5000

## ZINC ACETATE DIHYDRATE

- Zn(CH<sub>3</sub>COO)<sub>2</sub> x 2 H<sub>2</sub>O
- M = 219.49 g/mol
- CAS no. 5970-45-6
- EC no. 209-170-2
- Density 1.74 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

### GHS

- H302 H410
- P262 P273 P501



### Specification

- Colourless to white solid
- Melting point 237 °C

## ZINC ACETATE DIHYDRATE PURISS., USP (99.0 – 102.0 %)

### Specification

- Arsenic (As) max. 0.0003 %
- Calcium (Ca) max. 0.005 %
- Iron (Fe) max. 0.005 %
- Potassium (K) max. 0.005 %
- Magnesium (Mg) max. 0.005 %
- Sodium (Na) max. 0.005 %
- Lead (Pb) max. 0.002 %
- Chloride (Cl) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.01 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	112.1000

**ZINC ACETATE DIHYDRATE P. A. (MIN. 99.5 %)****Specification**

- Insoluble matter max. 0.005 %
- Calcium (Ca) max. 0.001 %
- Cadmium (Cd) max. 0.0005 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.001 %
- Magnesium (Mg) max. 0.0005 %
- Manganese (Mn) max. 0.0005 %
- Sodium (Na) max. 0.001 %
- Lead (Pb) max. 0.001 %
- Chloride (Cl) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Nitrogen (N) max. 0.001 %

Quantity	Packaging material	Art. no.
250 g	Plastic bottle	105.0250
1 kg	Plastic bottle	105.1000

**ZINC CHLORIDE ANHYDROUS PURISS., DAB, PH. EUR., BP, PH. FRANÇ., USP (98.0 – 100.5 %)**

- ZnCl<sub>2</sub>
- M = 136.28 g/mol
- CAS no. 7646-85-7
- EC Index no. 030-003-00-2
- EC no. 231-592-0
- Density 2.91 g/cm<sup>3</sup>
- UN-No. 2331
- ADR 8, III

**GHS**

- H302 H314 H335 H410
- P260 P273 P280 P301+P330+P331 P303+P361+P353 P305+P351+P338 P310 P391

**Specification**

- Colourless solid
- Melting point 283 °C
- Boiling point 732 °C
- pH (100 g/l H<sub>2</sub>O) ±5.0
- Ammonium (NH<sub>4</sub>) max. 0.03 %
- Arsenic (As) max. 0.0002 %
- Calcium (Ca) max. 0.01 %
- Iron (Fe) max. 0.001 %
- Potassium (K) max. 0.02 %
- Magnesium (Mg) max. 0.01 %
- Sodium (Na) max. 0.01 %
- Heavy metals (as Pb) max. 0.005 %
- Sulphate (SO<sub>4</sub>) max. 0.02 %
- Nitrogen (N) max. 0.005 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	110.1000
25 kg	Paper bag	110.9025

**ZINC OXIDE PURISS., PH. EUR. (99.0 – 100.5 %)**

- ZnO
- M = 81.37 g/mol
- CAS no. 1314-13-2
- EC Index no. 030-013-00-7
- EC no. 215-222-5
- Density 5.61 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

**GHS**

- H410
- P273

**Specification**

- White to slightly yellowish powder
- Identity complies
- Solubility complies
- Alkaline reacting substances complies
- Carbonate and acid insoluble matter complies
- Loss on ignition max. 1.0 %
- Arsenic (As) max. 0.0005 %
- Lead (Pb) max. 0.005 %
- Cadmium (Cd) max. 0.001 %
- Iron (Fe) max. 0.02 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	117.1000

## ZINC SULPHATE HEPTAHYDRATE P. A., ACS, ISO, PH. EUR. (MIN. 99.5 %)

- $\text{ZnSO}_4 \times 7 \text{H}_2\text{O}$
- M = 287.54 g/mol
- CAS no. 7446-20-0
- EC Index no. 030-006-00-9
- EC no. 231-793-3

- Density 1.97 g/cm<sup>3</sup>
- UN-No. 3077
- ADR 9, III

### GHS

- H302 H318 H410
- P273 P280 P301+P312  
P305+P351+P338 P310 P391 P501



### Specification

- Colourless powder
- Melting point 100 °C
- Arsenic (As) max. 0.00005 %
- Calcium (Ca) max. 0.001 %
- Cadmium (Cd) max. 0.0002 %
- Copper (Cu) max. 0.0005 %
- Iron (Fe) max. 0.0005 %
- Potassium (K) max. 0.001 %
- Magnesium (Mg) max. 0.001 %
- Manganese (Mn) max. 0.0002 %
- Sodium (Na) max. 0.0005 %
- Lead (Pb) max. 0.0005 %
- Chloride (Cl) max. 0.0005 %
- Nitrogen (N) max. 0.0005 %
- pH (5 %, 25 °C) 4.4 – 6.0
- Insoluble matter max. 0.01 %
- Nitrate (NO<sub>3</sub>) max. 0.002 %
- Ammonium (NH<sub>4</sub>) max. 0.001 %

Quantity	Packaging material	Art. no.
1 kg	Plastic bottle	123.1000

## ZINC SULPHATE SOLUTION 0.1 MOL/L ACC. PH. EUR. CHAPTER 4.2.2 (0.1 M)

- traceable to NIST

- UN-No. 3082
- ADR 9, III

### GHS

- H319 H411
- P264 P273 P280 P305+P351+P338  
P337+P313 P501



### Specification

- Colourless liquid
- Assay (20 °C) 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	120.1011

## ZIRCONIUM(IV) OXIDE CHLORIDE OCTAHYDRATE P. A. (MIN. 99.5 %)

- $\text{ZrOCl}_2 \times 8 \text{H}_2\text{O}$
- M = 322.28 g/mol
- CAS no. 13520-92-8
- EC no. 231-717-9

- Density 1.91 g/cm<sup>3</sup>
- UN-No. 3260
- ADR 8, II

### GHS

- H314
- P280 P301+P330+P331  
P305+P351+P338 P309 P311



### Specification

- Colourless to white solid
- Iron (Fe) max. 0.001 %
- Titanium (Ti) max. 0.005 %
- Heavy metals (as Pb) max. 0.001 %
- Sulphate (SO<sub>4</sub>) max. 0.005 %
- Hafnium (Hf) max. 3.0 %

Quantity	Packaging material	Art. no.
100 g	Plastic bottle	129.0100



Thread sizes of our packaging for chemicals → see page 360 f.

**CONCENTRATED  
VOLUMETRIC  
SOLUTIONS**



# CONCENTRATED VOLUMETRIC SOLUTIONS

## ACETIC ACID VOLUMETRIC SOLUTIONS

- CH<sub>3</sub>COOH
- UN-No. 2790
- ADR 8, III

### ACETIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(CH<sub>3</sub>COOH) 0.1 MOL/L (0.1 N)

#### GHS

- H315 H319
- P280 P302+P352 P305+P351+P338  
P332+P313 P337+P313



#### Specification

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	2264.0001

### ACETIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(CH<sub>3</sub>COOH) 1 MOL/L (1 N)

#### GHS

- H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P405 P501



#### Specification

- Assay 0.995 – 1.005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	2243.0001

## AMMONIUM THIOCYANATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C((NH<sub>4</sub>)SCN) 0.1 MOL/L (0.1 N)

- (NH<sub>4</sub>)SCN

#### Specification

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	2619.0001

## BROMIDE BROMATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(Br<sub>2</sub>) 0.05 MOL/L (0.1 N)

- Br<sub>2</sub>
- H318 H350
- P201 P202 P280 P305+P351+P338  
P308+P313 P310 P405 P501



#### Specification

- Assay 0.04975 – 0.05025 M
- Potassium bromate/bromide solution

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1639.0001

**EDTA DISODIUM SALT SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION  
C(Na<sub>2</sub>-EDTA x 2 H<sub>2</sub>O) 0.1 MOL/L (0.2 N)**

- Na<sub>2</sub>-EDTA x 2 H<sub>2</sub>O
- UN-No. 1824
- ADR 8, II
- GHS**
- H314
- P260 P280 303+361+P533  
P305+P351+P338 P310 P501



**Specification**

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	2291.0001

**HYDROCHLORIC ACID VOLUMETRIC SOLUTIONS**

- HCL

**HYDROCHLORIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(HCl) 0.1 MOL/L (0.1 N)**

- UN-No. 1789
- ADR 8, III
- GHS**
- H290
- P390



**Specification**

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	814.0001

**HYDROCHLORIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(HCl) 0.2 MOL/L (0.2 N)**

- UN-No. 1789
- ADR 8, III
- GHS**
- H290 H315 H319 H335
- P261 P271 P280 P302+P352 P304+P340  
P305+P351+P338 P312 P390  
P403+P233 P501



**Specification**

- Assay 0.1990 – 0.2010 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	832.0001

**HYDROCHLORIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(HCl) 0.5 MOL/L (0.5 N)**

- UN-No. 1789
- ADR 8, III
- GHS**
- H290 H315 H319 H335
- P261 P271 P280 P302+P352 P304+P340  
P305+P351+P338 P312 P390  
P403+P233 P501



**Specification**

- Assay 0.4975 – 0.5025 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	835.0001

# CONCENTRATED VOLUMETRIC SOLUTIONS

## HYDROCHLORIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(HCl) 1 MOL/L (1 N)

- UN-No. 1789
- ADR 8, II

### GHS

- H290 H314 H335
- P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P390 P501



### Specification

- Assay 0.995 – 1.005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	840.0001

## IODIDE-IODATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(I<sub>2</sub>) 1/128 MOL/L (1/64 N)

- I<sub>2</sub>

### GHS

- H319
- P264 P280 P305+P351+P338  
P337+P313



### Specification

- Assay 0.015547 – 0.015704 N
- Potassium iodate/iodide solution

Quantity	Packaging material	Art. no.
1 Amp.	Glass ampoule	1691.0001

## IODINE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(I<sub>2</sub>) 0.05 MOL/L (0.1 N)

- I<sub>2</sub>

- UN-No. 2922
- ADR 8 (6.1), I

### Specification

- Assay 0.04975 – 0.05025 M

Quantity	Packaging material	Art. no.
1 Amp.	Glass ampoule	1823.0001

## NITRIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(HNO<sub>3</sub>) 1 MOL/L (1 N)

- HNO<sub>3</sub>
- UN-No. 2031
- ADR 8, II

### GHS

- H314 EUH071
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P405 P501



### Specification

- Assay 0.995 – 1.005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	861.0001



**OXALIC ACID FOR 1000 ML VOLUMETRIC SOLUTION  
C(C<sub>2</sub>H<sub>2</sub>O<sub>4</sub>) 0.05 MOL/L (0.1 N)**

- C<sub>2</sub>H<sub>2</sub>O<sub>4</sub>

**Specification**

- Assay 0.04975 – 0.05025 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1250.0001

**POTASSIUM BROMATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION  
C(KBrO<sub>3</sub>) 1/60 MOL/L (0.1 N)**

- KBrO<sub>3</sub>

**GHS**

- H350
- P201 P202 P280 P308+P313 P405 P501



**Specification**

- Assay 0.0995 – 0.1005 N

Quantity	Packaging material	Art. no.
1 Amp.	Glass ampoule	1606.0001

**POTASSIUM DICHROMATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION  
C(K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>) 1/60 MOL/L (0.1 N)**

- K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>
- UN-No. 2922
- ADR 8, I

**GHS**

- H302+H332 H314 H317 H334 H335  
H340 H350 H360FD H411
- P201 P260 P273 P280 P284  
P301+P330+P331 P303+P361+P353  
P304+P340 P305+P351+P338 P310  
P362+P364 P391 P403+P233 P501



**Specification**

- Assay 0.0995 – 0.1005 N

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1647.0001

**POTASSIUM HYDROXIDE VOLUMETRIC SOLUTIONS**

- KOH
- UN-No. 1814
- ADR 8, II

**POTASSIUM HYDROXIDE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(KOH) 0.1 MOL/L (0.1 N)**

**GHS**

- H290 H314
- P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P312 P390



**Specification**

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1667.0001

## POTASSIUM HYDROXIDE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(KOH) 1 MOL/L (1 N)

### GHS

- H290 H302 H314
- P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P312 P390



### Specification

- Assay 0.995 – 1.005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1671.0001

## POTASSIUM IODATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(KIO<sub>3</sub>) 1/60 MOL/L (0.1 N)

- KIO<sub>3</sub>
- GHS**
- H318
  - P280 P305+P351+P338 P310



### Specification

- Assay 0.0995 – 0.1005 N

Quantity	Packaging material	Art. no.
1 Amp.	Glass ampoule	1686.0001

## POTASSIUM PERMANGANATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(KMnO<sub>4</sub>) 0.02 MOL/L (0.1 N)

- KMnO<sub>4</sub>
  - UN-No. 3082
  - ADR 9, II
- GHS**
- H410
  - P273 P391 P501



### Specification

- Assay 0.0199 – 0.0201 M

Quantity	Packaging material	Art. no.
1 Amp.	Glass ampoule	1659.0001

## SILVER NITRATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(AgNO<sub>3</sub>) 0.1 MOL/L (0.1 N)

- AgNO<sub>3</sub>
  - UN-No. 1760
  - ADR 8, II
- GHS**
- H314 H410
  - P273 P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P391 P501



### Specification

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	Glass ampoule	848.0001

**SODIUM CARBONATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION  
C(Na<sub>2</sub>CO<sub>3</sub>) 0.05 MOL/L (0.1 N)**

- Na<sub>2</sub>CO<sub>3</sub>

**Specification**

- Assay 0.04975 – 0.05025 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1301.0001

**SODIUM HYDROXIDE VOLUMETRIC SOLUTIONS**

- NaOH

**SODIUM HYDROXIDE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(NaOH) 0.01 MOL/L (0.01 N)**

- UN-No. 1824
- ADR 8, III

**GHS**

- H315 H319
- P280 P302+P352 P305+P351+P338  
P332+P313 P337+P313



**Specification**

- Assay 0.00995 – 0.01005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1325.0001

**SODIUM HYDROXIDE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(NaOH) 0.1 MOL/L (0.1 N)**

- UN-No. 1824
- ADR 8, II

**GHS**

- H314
- P280 P301+P330+P331  
P303+P361+P353 P305+P351+P338  
P310 P501



**Specification**

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1332.0001

**SODIUM HYDROXIDE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(NaOH) 0.5 MOL/L (0.5 N)**

- UN-No. 1824
- ADR 8, II

**GHS**

- H314
- P280 P301+P330+P331 P303+P361+P353  
P305+P351+P338 P310



**Specification**

- Assay 0.4975 – 0.5025 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1336.0001

# CONCENTRATED VOLUMETRIC SOLUTIONS

## SODIUM HYDROXIDE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(NaOH) 1 MOL/L (1 N)

- UN-No. 1824
- ADR 8, II

### GHS

- H314
- P280 P301+P330+P331
- P303+P361+P353 P305+P351+P338
- P310 P501



### Specification

- Assay 0.995 – 1.005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1341.0001

## SODIUM THIOSULPHATE VOLUMETRIC SOLUTIONS

- Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

### SODIUM THIOSULPHATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) 0.01 MOL/L (0.01 N)

#### Specification

- Assay 0.00995 – 0.01005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1371.0001

### SODIUM THIOSULPHATE SOLUTION FOR 1000 ML VOLUMETRIC SOLUTION C(Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) 0.1 MOL/L (0.1 N)

#### Specification

- Assay 0.0995 – 0.1005 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	1387.0001



**SULPHURIC ACID VOLUMETRIC SOLUTIONS**

- H<sub>2</sub>SO<sub>4</sub>
- UN-No. 2796
- ADR 8, II

**SULPHURIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(H<sub>2</sub>SO<sub>4</sub>) 0.05 MOL/L (0.1 N)**

**GHS**

- H315 H319
- P280 P302+P352 P305+P351+P338  
P332+P313 P337+P313



**Specification**

- Assay 0.04975 – 0.05025 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	875.0001

**SULPHURIC ACID FOR 1000 ML VOLUMETRIC SOLUTION C(H<sub>2</sub>SO<sub>4</sub>) 0.5 MOL/L (1 N)**

**GHS**

- H314
- P260 P280 P301+P330+P331  
P303+P361+P353 P304+P340  
P305+P351+P338 P310 P405 P501



**Specification**

- Assay 0.4975 – 0.5025 M

Quantity	Packaging material	Art. no.
1 Amp.	PE ampoule	895.0001





**INDICATOR  
SOLUTIONS**

## BROMOCRESOL GREEN SOLUTION 0.04 %

- UN-No. 1219
- ADR 3, II

### GHS

- H226 H319 H336
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P405 P501



Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2772.0500

## BROMOCRESOL GREEN-METHYL RED SOLUTION

- UN-No. 1170
- ADR 3, II

### GHS

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
100 ml	Glass bottle	2771.0100
500 ml	Glass bottle	2771.0500

## BROMOCRESOL PURPLE

### BROMOCRESOL PURPLE 1 % (W/W) IN METHANOL

- UN-No. 1230
- ADR 3 (6.1), II

### GHS

- H225 H301+H311+H331 H370
- P210 P233 P241 P260 P280 P301+P310  
P303+P361+P353 P304+P340 P405 P501



Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2774.0500

### BROMOCRESOL PURPLE 1 % (W/W) AQUEOUS SOLUTION

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2776.0500

## BROMOPHENOL BLUE

### BROMOPHENOL BLUE 0.04 % AQUEOUS SOLUTION

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2786.0500

### BROMOPHENOL BLUE 0.1 % AQUEOUS SOLUTION

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2782.0500

### BROMOPHENOL BLUE 0.4 % AQUEOUS SOLUTION

Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2778.0500



**BROMOPHENOL BLUE 0.1 % (W/V) IN ISOPROPYL ALCOHOL**

- UN-No. 1219
- ADR 3, II

**GHS**

- H225 H319 H336
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P405 P501

**Specification**

- Sensitivity test complies

Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2784.0500

**BROMOTHYMOL BLUE SOLUTION 0.04 % IN DENATURED ETHANOL**

- UN-No. 1170
- ADR 3, II

**GHS**

- H226 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501

**Specification**

- Sensitivity test colour change  
yellow-blue complies

Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2788.0500

**ERIOCHROME BLUE BLACK R SOLUTION IN METHANOL**

- UN-No. 1230
- ADR 3 (6.1), II

**GHS**

- H225 H301+H311+H331 H370
- P210 P241 P260 P280 P301+P310  
P303+P361+P353 P405 P501



Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2775.0500

**FEHLING SOLUTION****FEHLING SOLUTION I**

- UN-No. 3082
- ADR 9, III

**GHS**

- H411
- P273 P391 P501



Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2779.1000

## FEHLING SOLUTION II

- UN-No. 1824
- ADR 8, II

### GHS

- H314
- P260 P280 P303+P361+P353  
P305+P351+P338 P310 P405 P501



### Specification

- Suitability for use complies

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2277.1000

## FERROIN SOLUTION (REDOX INDICATOR)

### GHS

- H412
- P273 P501

Quantity	Packaging material	Art. no.
100 ml	Glass bottle	2781.0100

## METHYLENE BLUE SOLUTION

- UN-No. 1170
- ADR 3, II

### GHS

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



## METHYLENE BLUE SOLUTION 1 %

Quantity	Packaging material	Art. no.
250 ml	Glass bottle	2797.0250

## METHYLENE BLUE SOLUTION 0.1 % IN ETHANOL

Quantity	Packaging material	Art. no.
250 ml	Glass bottle	2799.0250

## METHYL ORANGE SOLUTION

### METHYL ORANGE SOLUTION 0.04 % IN DENATURED ETHANOL

- UN-No. 1170
- ADR 3, III

### GHS

- H226 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2793.0500

**METHLY ORANGE SOLUTION 0.1 % IN ETHANOL**

- UN-No. 1170
- ADR 3, III

**GHS**

- H226 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
250 ml	Glass bottle	2791.0250

**METHYL PURPLE SOLUTION 15 % (V/V) IN ISOPROPYL ALCOHOL**

- UN-No. 1993
- ADR 3, II

**GHS**

- H225 H319 H336
- P210 P241 P303+P361+P353  
P305+P351+P338 P405 P501



Quantity	Packaging material	Art. no.
500 ml	Glass bottle	2792.0500

**METHYL RED SOLUTION 0.1 % IN DENATURED ETHANOL**

- UN-No. 1170
- ADR 3, III

**GHS**

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
125 ml	Plastic bottle	2794.0125
250 ml	Plastic bottle	2794.0250

**PHENOLPHTHALEIN SOLUTION****PHENOLPHTHALEIN SOLUTION 0.1 % IN DENATURED ETHANOL**

- UN-No. 1170
- ADR 3, III

**GHS**

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
250 ml	Glass bottle	2763.0250
500 ml	Glass bottle	2763.0500

**PHENOLPHTHALEIN SOLUTION 0.5 % IN DENATURED ETHANOL**

- UN-No. 1170
- ADR 3, III

**GHS**

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
1 l	Glass bottle	2766.1000

## PHENOLPHTHALEIN SOLUTION 1 % IN DENATURED ETHANOL

- UN-No. 1170
- ADR 3, III

### GHS

- H225 H319 H341 H350
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
250 ml	Plastic bottle	2761.0250
500 ml	Glass bottle	2761.0500
1 l	Plastic bottle	2761.1011

## SCREENED METHYL ORANGE SOLUTION 0.1 % IN DENATURED ETHANOL

- UN-No. 1170
- ADR 3, II

### GHS

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2795.0500

## STARCH SOLUTION

### STARCH SOLUTION 0.1 %

Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2755.1000

### STARCH SOLUTION 0.2 % (W/V) AQUEOUS SOLUTION

Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2759.0500

### STARCH SOLUTION 0.5 % (USP TEST SOLUTION)

Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2759.0500

### STARCH SOLUTION 1 %

Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2753.0500

### STARCH SOLUTION 2 %

Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2751.0500

**TA INDICATOR, PHENOLPHTHALEIN FREE**

- UN-No. 1170
- ADR 3, III

**GHS**

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
1 l	Plastic bottle	2752.1000

**TASHIRO INDICATOR (METHYL RED/METHYLENE BLUE IN ETHANOL)**

- UN-No. 1170
- ADR 3, II

**GHS**

- H225 H319
- P210 P233 P241 P243 P280  
P305+P351+P338 P337+P313  
P403+P235

**Specification**

- Sensitivity complies

Quantity	Packaging material	Art. no.
250 ml	Plastic bottle	726.0250

**TECATOR MIXED INDICATOR SOLUTION IN METHANOL**

- UN-No. 1230
- ADR 6.1, II

**GHS**

- H225 H301+H311+H331 H370
- P210 P241 P260 P301+P310  
P303+P361+P353 P405 P501



Quantity	Packaging material	Art. no.
100 ml	Glass bottle	2754.0100

**THYMOL BLUE SOLUTION 0.04 % IN DENATURED ETHANOL**

- UN-No. 1170
- ADR 3, III

**GHS**

- H226 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
500 ml	Plastic bottle	2756.0500

**UNIVERSAL INDICATOR SOLUTION**

- UN-No. 1170
- ADR 3, II

**GHS**

- H225 H319
- P210 P241 P280 P303+P361+P353  
P305+P351+P338 P501



Quantity	Packaging material	Art. no.
100 ml	Glass bottle	2749.0100
500 ml	Plastic bottle	2749.0500





**BIOLOGICAL  
BUFFERS**

LABSOLU

300 ml

BORO 3.3

## PBS

### PBS 1x, pH 7.4, 1000 ML (PHOSPHATE BUFFERED SALINE)

#### Specification

- Tablets, 28 mm diameter
- One tablet dissolved in 1000 ml of deionized water yields:
  - 0.14 M NaCl
  - 0.0027 M KCl
  - 0.010 M Phosphate buffer
- pH (25 °C) 7.40 ±0.05
- Weight 10.0 g ±1 %
- Optical clarity clear solution

Quantity	Packaging material	Art. no.
100 Tablets	Plastic box	8435.0100

### PBS 1x, pH 7.4, 500 ML (PHOSPHATE BUFFERED SALINE)

#### Specification

- Tablets, 25 mm diameter
- One tablet dissolved in 500 ml of deionized water yields:
  - 0.14 M NaCl
  - 0.0027 M KCl
  - 0.010 M Phosphate buffer
- pH (25 °C) 7.4 ±0.05
- Weight 5.0 g ±1 %
- Optical clarity clear solution

Quantity	Packaging material	Art. no.
12 Tablets	Blister	8418.0012
100 Tablets	Plastic box	8418.0100

### PBS 10x, pH 7.4, 1000 ML (PHOSPHATE BUFFERED SALINE 10X)

#### Specification

- White powder
- Each pouch dissolved in 1000 ml of deionized water yields:
  - 1.4 M NaCl
  - 0.027 M KCl
  - 0.10 M Phosphate buffer
- pH (25 °C) 7.4 ±0.05
- Weight 100 g ±1 %
- Optical clarity clear solution

Quantity	Packaging material	Art. no.
5 Pouches	Pouch	8461.0005





**DEHYDRATED  
CULTURE  
MEDIA**



# DEHYDRATED CULTURE MEDIA

## BAIRD PARKER AGAR (BASE)

Solid selective culture medium for the screening of Staphylococci from a variety of samples according to Pharmacopeial Harmonized Methods, ISO and DIN standards.

### Formulation (g/l):

Tryptone	10.00
Sodium pyruvate	10.00
Glycine	12.00
Meat extract	5.00
Lithium chloride	5.00
Yeast extract	1.00
Agar	17.00

### Directions:

Suspend 60 g of powder in 950 ml of distilled water.

### Supplement:

Egg Yolk Tellurite Emulsion 20 %  
(Art. no. 9557)

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9869.0500

## BLOOD AGAR (BASE)

Solid nutrient rich medium suitable for the cultivation and isolation of pathogenic microorganisms from clinical specimens.

### Formulation (g/l):

Meat extract	10.00
Tryptone	10.00
Sodium chloride	5.00
Agar	15.00

### Directions:

Suspend 40 g of powder in 950 ml of distilled water.

Final pH (25 °C) 7.3 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9850.0500

## BRAIN HEART INFUSION BROTH (BHI)

Liquid nutrient rich medium suitable for the cultivation and isolation of pathogenic microorganisms from clinical specimens.

### Formulation (g/l):

Brain extract	12.50
Heart extract	5.00
Peptone	10.00
Dextrose	2.00
Sodium chloride	5.00
di-Sodium phosphate	2.50

### Directions:

Dissolve 37 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.4 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9264.0500

**BRILLIANT GREEN BILE BROTH**

Liquid medium used for the detection of Coliforms in water according to APHA and ISO standards.

**Formulation (g/l):**

Bile	20.000
Lactose	10.000
Peptone	10.000
Brilliant green	0.013

**Directions:**

Suspend 40 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9835.0500

**CASEIN PEPTONE LECITHIN POLYSORBATE BROTH (BASE)**

Liquid medium used to dilute and neutralize pharmaceutical or cosmetic raw material or end product samples for the purpose of microbial enumeration.

**Formulation (g/l):**

Casein peptone	20.00
Soy lecithin	5.00

**Directions:**

Suspend 25 g of powder in 960 ml of distilled water.

Final pH (25 °C) 7.3 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9717.0500

**CETRIMIDE AGAR PH. EUR.**

Solid culture medium for the selective isolation of *Pseudomonas aeruginosa* according to Pharmacopeial Harmonized Methods and ISO standards.

**Formulation (g/l):**

Gelatin peptone	20.00
Magnesium chloride	1.40
Potassium sulphate	10.00
Cetyltrimethylammonium bromide	0.30
Agar	13.60

**Directions:**

Suspend 45.3 g of powder in 1 l of distilled water.

**Supplement:**

Glycerol

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9783.0500



Chapman Agar → Mannitol Salt Agar see page 326

# DEHYDRATED CULTURE MEDIA

## COLUMBIA AGAR PH. EUR.

Highly nutritious general purpose medium used for the isolation and cultivation of fastidious and nonfastidious microorganisms from clinical and non-clinical materials according to Pharmacopeial Harmonized Methods.

### Formulation (g/l):

Casein peptone	10.00
Meat peptone	5.00
Heart peptone	3.00
Yeast extract	5.00
Maize starch	1.00
Sodium chloride	5.00
Agar	15.00

### Directions:

Suspend 44 g of powder in 1 l of distilled water.

Final pH (25°C) 7.3 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9770.0500

## DEV NUTRIENT AGAR

Solid general purpose medium according to german regulation for food and water samples.

### Formulation (g/l):

Meat extract	10.00
Meat peptone	10.00
Sodium chloride	5.00
Agar	18.00

### Directions:

Suspend 43 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.3 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9643.0500

## DG 18 AGAR (DICHLORAN GLYCEROL CHLORAMPHENICOL AGAR) (BASE)

Solid differential and low water activity medium used for the determination of xerophilic fungi in low moisture food and interior according to ISO standard 16000-17:2008.

### Formulation (g/l):

Peptone	5.000
Dextrose	10.000
Potassium dihydrogen phosphate	1.000
Magnesium sulphate heptahydrate	0.500
Dichloran	0.002
Chloramphenicol	0.100
Agar	15.000

### Directions:

Suspend 31.7 g of powder in 1 l of distilled water.

### Supplement:

Glycerol

Final pH (25 °C) 5.6 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9685.0500

**DRBC AGAR (DICHLORAN ROSE BENGAL CHLORAMPHENICOL AGAR)**

Selective medium for the enumeration of moulds and yeasts in foodstuff according to ISO standards.

**Formulation (g/l):**

Mycological peptone	5.000
Dextrose	10.000
Potassium dihydrogen phosphate	1.000
Magnesium sulphate	0.500
Dichloran	0.002
Rose bengal	0.025
Chloramphenicol	0.100
Agar	15.000

**Directions:**

Suspend 31.6 g of powder in 1 l of distilled water.

Final pH (25 °C) 5.6 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9677.0500

**ENTEROBACTERIACEAE ENRICHMENT BROTH MOSSEL (EE BROTH)**

Liquid culture medium used for the enrichment of Enterobacteria according to Pharmacopeial Harmonized Methods and ISO standards.

**Formulation (g/l):**

Gelatin peptone	10.000
Dextrose	5.000
Ox bile	20.000
di-Sodium phosphate dihydrate	8.000
Potassium dihydrogen phosphate	2.000
Brilliant green	0.0135

**Directions:**

Suspend 45 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9571.0500

**FRASER BROTH (BASE)**

Liquid culture medium for the enrichment and detection of *Listeria* spp.

**Formulation (g/l):**

Soy peptone	5.000
Tryptone	5.000
Meat extract	5.000
Yeast extract	5.000
Sodium chloride	20.000
Esculin	1.000
di-Sodium phosphate	9.600
Potassium dihydrogen phosphate	1.350
Lithium chloride	3.000

**Directions:**

Dissolve 49.25 g of powder in 1 l of distilled water.

**Supplements:**

Fraser *Listeria* Selective Supplement  
(Art. no. 9442)  
Half Fraser *Listeria* Selective Supplement  
(Art. no. 9250)

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9439.0500

## LAURYL SULPHATE BROTH

Liquid medium used for the detection and enumeration of coliform bacteria according to IDF-FIL 73B and ISO standards.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Tryptose	20.00	Dissolve 35.6 g of powder in 1 l of distilled water.
Sodium lauryl sulphate	0.10	
Lactose	5.00	
di-Potassium phosphate	2.75	
Potassium dihydrogen phosphate	2.75	
Sodium chloride	5.00	

Final pH (25 °C) 6.8 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8848.0500

## LB AGAR ACC. TO LENNOX

Standard agar based on LB broth acc. to Lennox, with low salt content (5 g/l NaCl). Ideal for general purposes and especially for growing and maintaining recombinant *Escherichia coli* strains.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Tryptone	10.00	Suspend 35 g of powder in 1 l of distilled water.
Yeast extract	5.00	
Sodium chloride	5.00	
Agar bacteriological	15.00	

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8876.0500

## LB AGAR ACC. TO MILLER

Standard agar based on LB broth acc. to Miller. Ideal for general purposes and especially for growing and maintaining *Escherichia coli* strains used in molecular microbiology procedures.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Tryptone	10.00	Suspend 40 g of powder in 1 l of distilled water.
Yeast extract	5.00	
Sodium chloride	10.00	
Agar bacteriological	15.00	

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8843.0500

## LB BROTH ACC. TO LENNOX

Standard medium with low salt concentration (5 g/l NaCl), ideal for general purposes and the cultivation of recombinant *Escherichia coli* strains.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Tryptone	10.00	Suspend 20 g of powder in 1 l of distilled water.
Yeast extract	5.00	
Sodium chloride	5.00	

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8891.0500

**LB BROTH ACC. TO MILLER**

Standard medium for general purposes and especially for the cultivation of *Escherichia coli*, high-salt content (10 g/l NaCl).

**Formulation (g/l):**

Tryptone	10.00
Yeast extract	5.00
Sodium chloride	10.00

**Directions:**

Suspend 25 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8822.0500
5 kg	Plastic canister	8822.5000

**LEGIONELLA BCYE AGAR (BASE)**

Solid medium used for the detection, isolation and enumeration of *Legionella* from water according to ISO standards 11731:2017.

**Formulation (g/l):**

Activated charcoal	2.00
Yeast extract	10.00
Agar	15.00

**Directions:**

Suspend 13.5 g of powder in 500 ml of distilled water.

**Supplements:**

Legionella BCYE Growth Supplement (Art. no. 8861)  
Legionella GVPC Selective Supplement (Art. no. 8820)

Final pH (25 °C) 6.8 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8811.0500

**MACCONKEY AGAR PH. EUR.**

Solid selective and differential medium used for the detection, isolation and enumeration of *Salmonella* and Coliforms in clinical specimens according to Pharmacopeial Harmonized Methods and in foodstuff specimens according to ISO standard 21150.

**Formulation (g/l):**

Pancreatic digest of gelatin	17.000
Meat peptone	1.500
Casein peptone	1.500
Lactose monohydrate	10.000
Bile salts	1.500
Sodium chloride	5.000
Neutral red	0.030
Crystal violet	0.001
Agar	15.000

**Directions:**

Suspend 51.5 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.1 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8796.0500

## MACCONKEY BROTH PH. EUR.

Liquid medium for the detection and enumeration of Coliforms according to Pharmacopeial Harmonized Methods.

### Formulation (g/l):

Pancreatic digest of gelatin	20.00
Lactose monohydrate	10.00
Ox bile	5.00
Bromocresol purple	0.01

### Directions:

Dissolve 35 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.3 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8753.0500

## MALT EXTRACT BROTH

Liquid medium for the cultivation of yeasts and moulds.

### Formulation (g/l):

Malt extract	17.00
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### Directions:

Dissolve 17 g of powder in 1 l of distilled water.

Final pH (25 °C) 4.8 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8764.0500

## MANNITOL SALT AGAR (CHAPMAN AGAR)

Solid selective medium for the isolation of pathogenic Staphylococci according to Pharmacopeial Harmonized Methods and ISO standards.

### Formulation (g/l):

Beef extract	1.000
Pancreatic digest of casein	5.000
Peptic digest of meat	5.000
Sodium chloride	75.000
D-Mannitol	10.000
Phenol red	0.025
Agar	15.000

### Directions:

Suspend 111 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.4 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8743.0500



General instructions and application areas → see page 366 f.



**MRS AGAR ISO**

Solid medium for the culture of lactic acid bacteria according to deMan, Rogosa and Sharpe, modified according to ISO standards and IFU methods.

**Formulation (g/l):**

Enzymatic digest of casein	10.00
Meat extract	10.00
Yeast extract	4.00
D(+)-Glucose	20.00
Sodium acetate	5.00
tri-Ammonium citrate	2.00
Magnesium sulphate heptahydrate	0.20
Manganese sulphate tetrahydrate	0.05
di-Potassium phosphate	2.00
Polysorbate 80	1.08
Agar	14.00

**Directions:**

Suspend 68.3 g of powder in 1 l of distilled water.

Final pH (25 °C) 5.7 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8761.0500

**MRS BROTH**

Liquid culture medium for the isolation of Lactobacilli according to deMan, Rogosa and Sharpe.

**Formulation (g/l):**

Peptone proteose	10.00
Meat extract	8.00
Yeast extract	4.00
D(+)-Glucose	20.00
Sodium acetate	5.00
tri-Ammonium citrate	2.00
Magnesium sulphate	0.20
Manganese sulphate	0.05
di-Potassium phosphate	2.00
Polysorbate 80	1.00

**Directions:**

Suspend 52 g of powder in 1 l of distilled water.

Final pH (25 °C) 6.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8733.0500

**MYP AGAR (MANNITOL EGG YOLK POLYMYXIN AGAR) (BASE)**

Selective solid medium according to Mossel for the isolation and identification of *Bacillus cereus* from food samples according to ISO standards.

**Formulation (g/l):**

Peptone	10.000
Mannitol	10.000
Sodium chloride	10.000
Meat extract	1.000
Phenol red	0.025
Agar	15.000

**Directions:**

Suspend 46 g of powder in 900 ml of distilled water.

**Supplements:**

Egg Yolk Emulsion 20 %  
(Art. no. 9578)  
Polymyxin B Selective Supplement  
(Art. no. 8477)

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8710.0500

# DEHYDRATED CULTURE MEDIA

## NUTRIENT AGAR APHA, ISO

Solid culture medium for general purpose use according to ISO standards and APHA.

### Formulation (g/l):

Peptone	5.00
Meat extract	3.00
Agar	15.00

### Directions:

Suspend 23 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8657.0500

## ORANGE SERUM AGAR

Solid medium for the cultivation of aciduric organisms especially those associated with the spoilage of citrus products and their derivatives.

### Formulation (g/l):

Tryptone	10.00
Yeast extract	3.00
Orange serum	5.00
Dextrose	4.00
di-Potassium phosphate	3.00
Agar	17.00

### Directions:

Suspend 42 g of powder in 1 l of distilled water.

Final pH (25 °C) 5.5 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8546.0500

## OXFORD LISTERIA AGAR (BASE)

Solid selective and differential medium for the detection, enumeration and isolation of *Listeria* spp. according to ISO standards 11290-1 and 11290-2.

### Formulation (g/l):

Tryptone	10.00
Lithium chloride	15.00
Proteose peptone	10.00
Sodium chloride	5.00
Yeast extract	3.00
Starch	1.00
Esculin	1.00
Ammonium iron(III) citrate	0.50
Agar	13.00

### Directions:

Suspend 58.5 g of powder in 1 l of distilled water.

### Supplement:

Oxford Agar Selective Supplement (Art. no. 9594)

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8519.0500

**PALCAM LISTERIA AGAR (BASE)**

Solid selective and differential medium for the detection, enumeration and isolation of *Listeria* spp. according to ISO standards 11290-1 and 11290-2.

**Formulation (g/l):**

Tryptone	23.00
Lithium chloride	15.00
Mannitol	10.00
Sodium chloride	5.00
Yeast extract	3.00
Starch	1.00
Esculin	0.80
Ammonium iron(III) citrate	0.50
Dextrose	0.50
Phenol red	0.08
Agar	13.00

**Directions:**

Suspend 72 g of powder in 1 l of distilled water.

**Supplement:**

Palcam Listeria Agar  
Selective Supplement  
(Art. no. 8439)

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8429.0500

**PEPTONE WATER, BUFFERED ISO**

Liquid medium for the dilution and non-selective pre-enrichment from food samples.

**Formulation (g/l):**

Bacteriological peptone	10.00
Sodium chloride	5.00
di-Sodium hydrogen phosphate (anhydrous)	3.5*
Potassium phosphate	1.50

**Directions:**

Dissolve 20 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8449.0500

\* Equivalent to 9.0 g of disodium hydrogen phosphate dodecahydrate.

**PLATE COUNT AGAR (PCA)**

Medium for aerobic plate counts by the surface inoculation method according to ISO standards 4833, 8552 and 17410 and IFU No. 6.

**Formulation (g/l):**

Casein peptone	5.00
Yeast extract	2.50
Dextrose	1.00
Agar	15.00

**Directions:**

Suspend 23.5 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8425.0500

## PLATE COUNT SKIM MILK AGAR (PCA)

Solid medium for the plate count of milk and dairy products according to DIN and FIL-IDF standards.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Tryptone	5.00	Suspend 20 g of powder in 1 l of distilled water.
Yeast extract	2.50	
Skim milk	1.00	
Dextrose	1.00	
Agar	10.50	

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8459.0500

## POTATO DEXTROSE AGAR PH. EUR.

Solid culture medium for the detection and enumeration of yeasts and moulds in foodstuff (especially recommended for dairy products) and other samples according to Pharmacopeial Harmonized Methods.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Potato peptone	4.0*	Suspend 39 g of powder in 1 l of distilled water.
Glucose	20.00	
Agar	15.00	

Final pH (25 °C) 5.6 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8992.0500

\* Equivalent to 200 g infusion from potatoes

## R2A AGAR PH. EUR.

Solid medium for the enumeration of heterotrophic microorganisms in treated waters according to Pharmacopeial Harmonized Methods.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Proteose peptone	0.500	Suspend 18.1 g of powder in 1 l of distilled water.
Casein hydrolysate (Tryptone)	0.500	
Yeast extract	0.500	
D(+)-Glucose	0.500	
Starch	0.500	
Sodium pyruvate	0.300	
di-Potassium phosphate	0.300	
Magnesium sulphate (anhydrous)	0.024	
Agar	15.000	

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8267.0500

**RAPPAPORT VASSILIADIS BROTH**

Liquid medium for the selective enrichment of *Salmonella* in foodstuff and other samples, according to ISO and FIL-IDF standards.

**Formulation (g/l):**

Soy peptone	4.500
Sodium chloride	7.200
Potassium dihydrogen phosphate	1.260
di-Potassium phosphate	0.180
Magnesium chloride (anhydrous)	13.40
Malachite green	0.036

**Directions:**

Suspend 26.8 g of powder in 1 l of distilled water.

Final pH (25 °C) 5.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8229.0500

**REINFORCED CLOSTRIDIAL MEDIUM (RCM) PH. EUR.**

Liquid medium for the cultivation and enumeration of Clostridia by the MPN technique according to Pharmacopoeial Harmonized Methods and ISO standards.

**Formulation (g/l):**

Casein peptone	10.00
Yeast extract	3.00
Meat extract	10.00
Dextrose	5.00
Sodium chloride	5.00
Sodium acetate	3.00
Soluble starch	1.00
Cysteine	0.50
Agar	0.50

**Directions:**

Suspend 38 g of powder in 1 l of distilled water.

Final pH (25 °C) 6.8 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9749.0500

**SABOURAUD 4% DEXTROSE AGAR PH. EUR.**

Solid medium for the cultivation and enumeration of yeasts and fungi according to Pharmacopoeial Harmonized Methods and ISO standards.

**Formulation (g/l):**

D(+)-Glucose	40.00
Meat peptone	5.00
Casein peptone	5.00
Agar	15.00

**Directions:**

Suspend 65 g of powder in 1 l of distilled water.

Final pH (25 °C) 5.6 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8135.0500

# DEHYDRATED CULTURE MEDIA

## SABOURAUD 2% DEXTROSE BROTH PH. EUR.

Liquid medium for fungal isolation according to Pharmacopeial Harmonized Methods.

### Formulation (g/l):

Casein peptone	5.00
Meat peptone	5.00
D(+)-Glucose	20.00

### Directions:

Dissolve 30 g of powder in 1 l of distilled water.

Final pH (25 °C) 5.6 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8159.0500

## SLANETZ AND BARTLEY AGAR (BASE)

Solid differential and selective medium for the detection and enumeration of Enterococci according to ISO standards.

### Formulation (g/l):

Tryptose	20.00
Yeast extract	5.00
Dextrose	2.00
di-Potassium phosphate	4.00
Sodium azide	0.40
Agar	12.00

### Directions:

Suspend 43.4 g of powder in 1 l of distilled water.

### Supplement:

TTC solution 1 %, sterile (Art. no. 8055)

Final pH (25 °C) 7.2 ±0.1

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8174.0500

## STANDARD 1 NUTRIENT AGAR

Solid medium for the cultivation of fastidious bacteria.

### Formulation (g/l):

Casein peptone	15.00
Yeast extract	3.00
Sodium chloride	6.00
Dextrose	1.00
Agar	15.00

### Directions:

Suspend 40 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.5 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8152.0500

## STANDARD 1 NUTRIENT BROTH

Liquid medium for cultivation of fastidious bacteria.

### Formulation (g/l):

Casein peptone	15.00
Yeast extract	3.00
Sodium chloride	6.00
D(+)-Glucose	1.00

### Directions:

Suspend 25 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.5 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8180.0500

**TERRIFIC BROTH**

Nutrient rich broth for the cultivation of recombinant *Escherichia coli* strains, with Glycerol.

**Formulation (g/l):**

Yeast extract	24.00
Tryptone	12.00
di-Potassium phosphate	9.40
Potassium dihydrogen phosphate	2.20

**Directions:**

Dissolve 47.6 g of powder in 1 l of distilled water.

**Supplement:**

Glycerol

Final pH (25 °C) 7.2 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8049.0500

**TRIPLE SUGAR IRON AGAR**

Solid differential medium for the identification of Enterobacteria according to ISO standards 6579, 6785 and 10272.

**Formulation (g/l):**

Peptone	20.000
Meat extract	3.000
Yeast extract	3.000
Lactose	10.000
Sucrose	10.000
Dextrose	1.000
Sodium chloride	5.000
Iron(III) citrate	0.300
Sodium thiosulphate	0.300
Phenol red	0.024
Agar	12.000

**Directions:**

Suspend 64.6 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.4 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9661.0500

**TRYPTIC SOY AGAR (TSA) PH. EUR.**

General purpose medium containing animal and plant peptone according to Pharmacopoeial Harmonized Methods and ISO standards.

**Formulation (g/l):**

Casein peptone	15.00
Soy peptone	5.00
Sodium chloride	5.00
Agar	15.00

**Directions:**

Suspend 40 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.3 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9738.0500

## DEHYDRATED CULTURE MEDIA

### TRYPTIC SOY AGAR (TSA) WITH POLYSORBATE 80 AND LECITHIN PH. EUR.

Solid medium for the sampling of surfaces of sanitary importance using the contact plate technique.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Tryptone	15.00	Suspend 45.7 g of powder in 1 l of distilled water.
Soy peptone	5.00	
Sodium chloride	5.00	
Lecithin	0.70	
Polysorbate 80	5.00	
Agar	15.00	

Final pH (25 °C) 7.3 ±0.2

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
500 g	Plastic bottle	9775.0500

### TRYPTIC SOY BROTH (TSB) PH. EUR.

Liquid high nutrient medium for general purpose use according to Pharmacopeial Harmonized Methods.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Casein peptone	17.00	Dissolve 30 g of powder in 1 l of distilled water.
Soy peptone	3.00	
Sodium chloride	5.00	
di-Potassium phosphate	2.50	
Dextrose	2.50	

Final pH (25 °C) 7.3 ±0.2

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
500 g	Plastic bottle	9721.0500

### TSC AGAR (TRYPTOSE SULPHITE CYCLOSERINE AGAR)

Solid medium for the isolation and differentiation of *Clostridium perfringens* according to ISO standards and other regulations.

<b>Formulation (g/l):</b>		<b>Directions:</b>	<b>Supplements:</b>
Tryptone	15.00	Dissolve 45 g of powder in 1 l of distilled water.	D-Cycloserine Selective Supplement (Art. no. 9795) Egg Yolk Emulsion 20 % (Art. no. 9578) Clostridium perfringens Supplement (Art. no. 9716)
Soy peptone	5.00		
Yeast extract	5.00		
Sodium disulphite	1.00		
Ammonium iron(III) citrate	1.00		
Agar	18.00		

Final pH (25 °C) 7.6 ±0.2

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
500 g	Plastic bottle	8032.0500



**VRB AGAR (VIOLET RED BILE LACTOSE AGAR)**

Solid medium for the detection and enumeration of Coliforms in milk and other dairy products according to APHA and ICMSF, FIL-IDF and ISO standards.

**Formulation (g/l):**

Yeast extract	3.000
Peptone	7.000
Bile salts No. 3	1.500
Lactose	10.000
Sodium chloride	5.000
Neutral red	0.030
Crystal violet	0.002
Agar	13.000

**Directions:**

Suspend 39.5 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.4 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7883.0500

**VRBD AGAR (VIOLET RED BILE DEXTROSE AGAR) PH. EUR.**

Selective solid medium for the enumeration of Enterobacteria according to Pharmacopeial Harmonized Methods and ISO standards.

**Formulation (g/l):**

Yeast extract	3.000
Pancreatic digest of gelatin	7.000
Bile salts	1.500
D(+)-Glucose monohydrate	10.000
Sodium chloride	5.000
Neutral red	0.030
Crystal violet	0.002
Agar	13.000

**Directions:**

Suspend 39.5 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.4 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7836.0500

**WORT AGAR**

Solid medium for the general cultivation of yeasts.

**Formulation (g/l):**

Malt extract	15.00
Casein peptone	0.75
Maltose	12.75
Dextrin	2.75
di-Potassium hydrogen phosphate	1.00
Ammonium chloride	1.00
Agar	17.00

**Directions:**

Suspend 50.25 g of powder in 1 l of distilled water.

**Supplement:**

Glycerol

Final pH (25 °C) 4.8 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7772.0500

# DEHYDRATED CULTURE MEDIA

## WORT BROTH

Liquid medium for the production of yeast suspensions.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Malt extract	15.00	Suspend 33 g of powder in 1 l of distilled water.
Casein peptone	1.00	
Maltose	12.50	
Dextrin	2.50	
Potassium dihydrogen phosphate	1.00	
Ammonium chloride	1.00	

Final pH (25 °C) 4.8 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7759.0500

## XLD AGAR (XYLOSE LYSINE DEOXYCHOLATE AGAR) ISO

Medium for the isolation of enteropathogenic species, especially *Shigella* and *Salmonella* in food and animal feeding stuff according to ISO standards.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Xylose	3.750	Suspend 55.43 g of powder in 1 l of distilled water.
L-Lysine	5.000	
Lactose	7.500	
Sucrose	7.500	
Sodium chloride	5.000	
Yeast extract	3.000	
Phenol red	0.080	
Sodium deoxycholate	1.000	
Sodium thiosulphate	6.800	
Ammonium iron(III) citrate	0.800	
Agar	15.000	

Final pH (25 °C) 7.4 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7649.0500

## YGC AGAR (YEAST EXTRACT GLUCOSE CHLORAMPHENICOL AGAR)

Solid and selective medium for the isolation and enumeration of yeasts and moulds in milk and dairy products according to ISO standard 7954 and FIL-IDF 94B.

<b>Formulation (g/l):</b>		<b>Directions:</b>
Glucose	20.00	Suspend 40 g of powder in 1 l of distilled water.
Yeast extract	5.00	
Chloramphenicol	0.10	
Agar	15.00	

Final pH (25 °C) 6.6 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7533.0500

**2X YT AGAR**

Solid nutrient medium for the cultivation of recombinant strains of *Escherichia coli* and for the growth of filamentous bacteriophages.

**Formulation (g/l):**

Trytone	16.00
Yeast extract	10.00
Sodium chloride	5.00
Agar	15.00

**Directions:**

Suspend 46 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7581.0500

**2X YT BROTH**

Liquid nutrient medium for the cultivation of recombinant strains of *Escherichia coli* and for the growth of filamentous bacteriophages.

**Formulation (g/l):**

Trytone	16.00
Yeast extract	10.00
Sodium chloride	5.00

**Directions:**

Suspend 31 g of powder in 1 l of distilled water.

Final pH (25 °C) 7.0 ±0.2

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	7548.0500

**Individual solutions for you**

How may we help you? Do you miss certain culture media or supplements? We will be happy to advise you personally and competently. Our qualified experts are at your disposal in the field and in the office. Please don't hesitate to contact your personal expert directly or to send your questions and suggestions to [sales@thgeyer.com](mailto:sales@thgeyer.com). We are happy to provide you with individual solutions.



A close-up photograph of a petri dish containing a bacterial culture on a red agar medium. The colonies are dark, circular, and arranged in several distinct, parallel streaks across the surface. The background is a soft-focus blue sky with white clouds. A red circle is overlaid on the left side of the image, containing the word 'SUPPLEMENTS' in white capital letters. A thin red line extends from the top right corner of the image towards the center of the red circle.

# **SUPPLEMENTS**

## SUPPLEMENTS

### CLOSTRIDIUM PERFRINGENS SUPPLEMENT

Sterile selective supplement for the isolation and presumptive identification of *Clostridium perfringens* by using fluorogenic substrates.

**Formulation (g/vial):**

MUP	
(4-Methylumbelliferyl phosphate)	0.025
D-Cycloserine	0.100

**Directions:**

Each vial is sufficient for 200 ml of medium base (Art. no. 8032).

Quantity	Packaging material	Art. no.
10 vials	Glass vial	9716.0010

### D-CYCLOSERINE SELECTIVE SUPPLEMENT

Sterile selective supplement for the isolation and presumptive identification of *Clostridium perfringens* according to ISO standards and other regulations.

**Formulation (g/vial):**

D-Cycloserine	0.100
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**Directions:**

Each vial is sufficient for 250 ml of medium base (Art. no. 8032).

Quantity	Packaging material	Art. no.
10 vials	Glass vial	9795.0010

### EGG YOLK EMULSION 20%, STERILE

Sterile egg yolk emulsion for microbiological media according to ISO 7932:2004.

**Formulation (g/l):**

Egg yolk	200 ml
Sterile water	800 ml

Quantity	Packaging material	Art. no.
100 ml	Glass bottle	9578.0100

### EGG YOLK TELLURITE EMULSION 20%, STERILE

Sterile egg yolk emulsion with potassium tellurite for the preparation of Baird Parker Medium according to ISO 6888-1.

**Formulation (g/l):**

Egg yolk	200 ml
Potassium tellurite	2.10
Sodium chloride	4.25
Sterile water	800 ml

Quantity	Packaging material	Art. no.
50 ml	Glass bottle	9557.0050
100 ml	Glass bottle	9557.0100

### FRASER LISTERIA SELECTIVE SUPPLEMENT

Sterile selective supplement for the isolation of *Listeria* species.

**Formulation (g/vial):**

Sodium nalidixate	0.0100
Acriflavine	0.0125
Ammonium iron(III) citrate	0.2500

**Directions:**

Each vial is sufficient for 500 ml of medium base (Art. no. 9439).

Quantity	Packaging material	Art. no.
10 vials	Glass vial	9442.0010

**HALF FRASER LISTERIA SELECTIVE SUPPLEMENT**Sterile selective supplement for *Listeria* enrichment according to ISO 11290-1:2006.

<b>Formulation (g/vial):</b>		<b>Directions:</b>
Sodium nalidixate	0.0050	Each vial is sufficient for 500 ml of medium base (Art. no. 9439).
Acriflavine	0.0062	
Ammonium iron(III) citrate	0.2500	

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
10 vials	Glass vial	9250.0010

**LEGIONELLA BCYE GROWTH SUPPLEMENT**

Growth supplement to complete the BCYE medium base.

<b>Formulation (g/vial):</b>		<b>Directions:</b>
ACES buffer	5.000	Each vial is sufficient for 500 ml of medium base (Art. no. 8811).
Potassium hydroxide	1.400	
Iron(III) pyrophosphate	0.125	Content: 5x freeze-dried supplement + 5x sterile solvent.
Potassium $\alpha$ -ketoglutarate	0.500	
L-Cysteine hydrochloride	0.200	

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
5 vials	Glass vial	8861.0005

**LEGIONELLA GVPC SELECTIVE SUPPLEMENT**Sterile selective supplement for the isolation of *Legionella* species from water samples.

<b>Formulation (g/vial):</b>		<b>Directions:</b>
Glycine	1.5000	Each vial is sufficient for 500 ml of medium base (Art. no. 8811).
Vancomycin	0.0005	
Polymyxin B sulphate	40000 IU	
Cycloheximide	0.0400	

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
10 vials	Glass vial	8820.0010

**MUG (4-METHYLBELLIFERYL- $\beta$ -D-GLUCURONIDE)**Sterile supplement for the detection of *Escherichia coli*.

<b>Formulation (g/vial):</b>		<b>Directions:</b>
4-Methylumbelliferyl- $\beta$ -D-glucuronide	0.050	Each vial is sufficient for 500 ml of medium base.

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
10 vials	Glass vial	8751.0010

**OXFORD AGAR SELECTIVE SUPPLEMENT**Sterile selective supplement for the isolation of *Listeria* in food samples.

<b>Formulation (g/vial):</b>		<b>Directions:</b>
Cycloheximide	0.2000	Each vial is sufficient for 500 ml of medium base (Art. no. 8519).
Colistin sulphate	0.0100	
Acriflavine	0.0025	
Cefotetan	0.0010	
Phosphomycin sodium salt	0.0050	

<b>Quantity</b>	<b>Packaging material</b>	<b>Art. no.</b>
10 vials	Glass vial	9594.0010

## SUPPLEMENTS

### PALCAM LISTERIA AGAR SELECTIVE SUPPLEMENT

Sterile selective supplement for the isolation of *Listeria* ssp.

**Formulation (g/vial):**

Polymyxin B	0.0050
Acriflavine	0.0025
Ceftazidime	0.0100

**Directions:**

Each vial is sufficient for 500 ml of medium base (Art. no. 8429).

Quantity	Packaging material	Art. no.
10 vials	Glass vial	8439.0010

### POLYMYXIN B SELECTIVE SUPPLEMENT

Sterile selective supplement for the isolation of *Bacillus cereus* in food samples.

**Formulation (IU/vial):**

Polymyxin B sulphate	50000
Excipient	(sufficient amount)

**Directions:**

Each vial is sufficient for 500 ml of medium base (Art. no. 8710).

Quantity	Packaging material	Art. no.
10 vials	Glass vial	8477.0010

### TTC SOLUTION 1%, STERILE

Indicator, added to many microbiological culture media.

**Formulation (g/l):**

2,3,5-Triphenyl tetrazolium chloride	10.0
Sterile water	1000 ml

Quantity	Packaging material	Art. no.
100 ml	Glass bottle	8055.0100



A close-up photograph of a petri dish containing a yellow agar medium. A blue plastic loop is resting on the surface of the agar. The background is a plain, light-colored surface. A red circular graphic element is overlaid in the bottom right corner, containing the text 'MEDIA COMPONENTS'.

**MEDIA  
COMPONENTS**

## AGAR BACTERIOLOGICAL, EUROPEAN TYPE

- Gel strength (1.5 %, Nikan) 800–1100 g/cm<sup>2</sup>
- Melting point (1.5 %) 85 ±3 °C
- Gelling point (1.5 %) 35 ±3 °C
- Turbidity (1.5 %) max. 12 NTU
- Absorbance at 450 nm (colorimetric) max. 0.200
- pH (1.5 %) after autoclaving 6.5 ±0.4
- Loss on drying max. 10 %
- Ash max. 4.5 %
- Total aerobic count < 3000 CFU/g
- Coliforms < 3 CFU/g
- Moulds and yeasts < 100 CFU/g

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9972.0500

## PEPTONE FROM CASEIN (PANCREATIC DIGESTED CASEIN)

- Amino nitrogen (AN) 3.0–4.0 %
- Total nitrogen (TN) 12.5–13.5 %
- Loss on drying max. 6.0 %
- Chlorides (NaCl) max. 6.0 %
- Ash max. 17.0 %
- pH (2 % solution) 6.5–7.5
- Total aerobic count < 10000 CFU/g
- Coliforms < 10 CFU/g
- Moulds and yeasts < 20 CFU/g

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9754.0500

## TRYPTONE FROM CASEIN (TRYPSIN-DIGESTED CASEIN)

- Amino nitrogen (AN) min. 4.0 %
- Total nitrogen (TN) 12.0–14.0 %
- Loss on drying max. 6.0 %
- Chlorides (NaCl) max. 1.0 %
- Ash max. 15.0 %
- pH (2 % solution) 6.8–7.2
- Total aerobic count < 10000 CFU/g
- Coliforms < 10 CFU/g
- Moulds and yeasts < 20 CFU/g

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	8028.0500

## YEAST EXTRACT

- Amino nitrogen (AN) min. 4.5–5.8 %
- Total nitrogen (TN) 10.0–11.8 %
- Total carbohydrates 7.0–13.0 % (g/100 g)
- Loss on drying max. 6.0 %
- Sodium chloride (NaCl) max. 0.5 %
- pH (2 % solution) 6.5–7.5
- Total aerobic count < 5000 CFU/g
- Coliforms < 5 CFU/g
- Moulds and yeasts < 100 CFU/g

Quantity	Packaging material	Art. no.
500 g	Plastic bottle	9263.0500





**MORE  
INFORMATION**

## CHEMICAL RESISTANCE OF LABSOLUTE® DISPOSABLE GLOVES

Chemical substance	CAS number	LABSOLUTE® Sensitive	LABSOLUTE® Protective	LABSOLUTE® Latex powder-free
Acetic acid, 10 %	64-19-7	● Level 6	● Level 6	● Level 2
Acetic acid, 100 %	64-19-7	n. a.	n. a.	n. a.
Acetone	67-64-1	N	N	N
Acetonitrile	75-05-8	N	N	N
Acrylamide, 40 %	79-06-1	● Level 6	● Level 6	● Level 6
Ammoniac, 25 % (ammonia solution)	1336-21-6	n. a.	n. a.	S
Ammonium peroxodisulfate (aqueous)	7727-54-0	● Level 3	● Level 5	n. a.
Benzalconiumchloride, liquid (Quats)	63449-41-2	n. a.	n. a.	n. a.
Carbon tetrachloride	56-23-5	N	● Level 1	n. a.
Chlorhexidindigluconat, 0,5 %	18472-51-0	n. a.	n. a.	n. a.
Chloroform	67-66-3	N	N	N
Cyclohexanol	108-93-0	n. a.	● Level 4	n. a.
Diesel fuel	64742-47-8	n. a.	● Level 5	n. a.
Diethyl ether	60-29-7	N	N	N
Diethylamine (DEA)	109-89-7	N	N	N
Dimethyl sulfoxide (DMSO)	67-68-5	N	N	N
Ethanol, 20 %	64-17-5	● Level 1	● Level 6	n. a.
Ethanol, 40 %	64-17-5	S	● Level 1	N
Ethanol, 70 %	64-17-5	S	● Level 1	N
Ethanol, 80 %	64-17-5	S	● Level 1	N
Ethanol p. a.	64-17-5	S	S	N
Ethidium bromide, 1 %	1239-45-8	● Level 6	● Level 6	N
2-Ethoxyethyl acetate	111-15-9	N	S	N
Ethyl acetate	141-78-6	N	S	N
Formaldehyde, 37 % in methanol (10 %)*	50-00-0	● Level 1	● Level 6	● Level 1
Formic acid, 100 %	64-18-6	N	S	N
Glutaraldehyde, 5 %	111-30-8	● Level 6	● Level 6	● Level 6
Heavy petrol (b.p. 150–190 °C)	8032-32-4	N	N	N
n-Heptane	142-82-5	N	S	N
n-Hexane	110-54-3	N	S	N
Hydrochloric acid, 10 %	7647-01-0	● Level 6	● Level 6	S

\* Permeability refers to formaldehyde 37 % only



Please note, that the chemical resistance depends directly on the application and the purity of the chemicals. Every user has to check the disposable glove carefully for damage. Recommendation for chemical resistance is not part of glove's specifications. All data of the table are based on laboratory experiments of the manufacturer. Th. Geyer assumes no liability, if the disposable gloves are not used as recommended. Please contact [pm@thgeyer.de](mailto:pm@thgeyer.de) for further information.

Chemical substance	CAS number	LABSOLUTE® Sensitive	LABSOLUTE® Protective	LABSOLUTE® Latex powder-free
Hydrochloric acid, 36 %	7647-01-0	S	● Level 3	S
Hydrofluoric acid, 40 %	7664-39-3	n. a.	● Level 1	n. a.
Hydrogen peroxide, 30 %	7722-84-1	n. a.	n. a.	n. a.
Isopropanol, 2-propanol, 40 %	67-63-0	● Level 1	● Level 1	S
Isopropanol, 2-propanol, 70 %	67-63-0	● Level 1	● Level 1	S
Isopropanol, 2-propanol p. a.	67-63-0	S	● Level 1	N
Methanol, 5 %	67-56-1	n. a.	● Level 6	n. a.
Methanol p. a.	67-56-1	N	S	N
1-Methyl-2-pyrrolidon	872-50-4	N	● Level 1	n. a.
Methylene chloride	75-09-2	N	N	N
Ninhydrine, 0.2 %	485-47-2	● Level 6	● Level 6	n. a.
Nitric acid, 10 %	7697-37-2	● Level 6	● Level 6	● Level 6
Nitric acid, 36 %	7697-37-2	S	● Level 4	● Level 6
Nitric acid, 50 %	7697-37-2	S	● Level 4	n. a.
Phenol, 10 % (carbolic acid)	108-95-2	S	● Level 2	n. a.
Phenol, 80 % (carbolic acid)	108-95-2	S	● Level 2	n. a.
Phosphoric acid, 10 %	7664-38-2	● Level 6	● Level 6	n. a.
Phosphoric acid, 30 %	7664-38-2	● Level 6	● Level 6	● Level 6
Phosphoric acid, 85 %	7664-38-2	● Level 6	● Level 6	n. a.
Potassium hydroxide solution, 30 %	1310-58-3	● Level 6	● Level 6	● Level 1
Sodium fluoride (aqueous)	7681-49-4	● Level 4	● Level 6	n. a.
Sodium hydroxide solution, 30 %	1310-73-2	● Level 6	● Level 6	● Level 4
Sodium hydroxide solution, 40 %	1310-73-2	● Level 6	● Level 6	● Level 4
Sulfuric acid, 96 %	7664-93-9	n. a.	● Level 1	n. a.
Thioglycol acid, 100 %	68-11-1	S	● Level 1	S
Toluene	108-88-3	N	N	N
Trichloroethane	71-55-6	N	N	N
Xylene	95-47-6	N	N	N

- n. a. not analysed
- N not recommended
- S only for splash protection
- Level 1 recommended for contact up to 30 min
- Level 2 recommended for application up to 60 min
- Level 3 recommended for application up to 120 min
- Level 4 recommended for application up to 240 min
- Level 5 recommended for application up to 480 min
- Level 6 recommended for application > 480 min

## CHEMICAL RESISTANCE OF PLASTICS AGAINST CHEMICALS

The mentioned resistance levels are only guide values, because the chemical resistance depends on many parameters, e. g. the concentration and temperature of the chemical, as well as simultaneous mechanical stress to the plastic. Anyhow, it is recommended to do some preliminary tests under the real conditions of the final application. Th. Geyer assumes no liability for the following recommendations.

Chemical substance	HDPE		LDPE		PP	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Acetaldehyde	-	-	+	--	-	--
Acetamide, saturated	++	++	++	++	++	++
Acetic acid, 100 % (Glacial acetic acid)	o	o	o	o	++	-
Acetic acid, 50 %	++	++	++	++	++	++
Acetone	++	++	-	-	++	-
Acetonitrile	++	++	++	++	-	--
Acetophenone	o	o	++	o	++	-
Acetylene, 100 %	++	o	++	o	++	o
Acrylonitrile	++	++	++	-	-	--
Adipic acid, saturated	++	++	++	+	++	++
Allyl alcohol, 96 %	++	-	-	-	+	+
Aluminium chloride, 10 %	++	++	++	+	++	++
Aluminium oxide, solid	++	++	++	++	++	++
Amino acids, generally	++	++	++	++	++	++
Ammonia, aquaous, 25 %	++	++	++	++	++	++
Ammonium chloride, aquaous	++	++	++	++	++	++
Ammonium hydroxide solution	+	+	+	o	+	+
Ammonium hydroxide, 5 %	++	++	++	++	++	++
Ammonium nitrate, aquaous, saturated	+	+	+	o	+	+
Ammonium oxalate	++	++	++	+	++	+
Ammonium sulfide	++	++	++	++	++	++
Ammonium sulphate, aquaous, saturated	+	+	+	o	+	+
Amyl acetate, n-	++	+	+	-	-	--
Amyl alcohol (1-Pentanol)	++	++	++	+	++	++
Aniline	++	+	++	-	+	-
Anti-freeze agent (Diethylene glycol)	++	++	++	++	++	++
Aqua regia	--	--	--	--	--	--
Barium chloride	++	++	++	++	++	++
Battery acid (sulphuric acid, 38 %)	+	+	+	+	+	+
Benzene	-	--	-	--	-	--
Benzoic acid, saturated	++	++	++	++	++	-
Benzyl alcohol	-	--	--	--	--	--
Benzyldehyde	++	-	-	-	++	--

+ good resistance (less damage of the material)

- poor resistance (not recommended)

o no value existing

++ very good resistance (virtually no damage of the material)

-- no resistance (heavy damage up to the complete destruction of the material)

Chemical substance	HDPE		LDPE		PP	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Bleaching solution (NaOCl, 12.5 % chlorine)	-	--	0	0	-	-
Blood	+	+	+	+	+	+
Boric acid, 10 %	++	++	++	++	++	++
Boric acid, 100 %	+	+	0	0	+	+
Brake fluid	++	0	++	0	++	++
Bromine	--	--	--	--	--	--
Bromine vapours	--	0	--	0	--	0
Bromobenzene	-	--	--	--	--	--
Butadiene (1,3-Butadiene)	-	--	--	--	--	--
Butane, gaseous (n-)	+	+	+	+	+	+
Butanol, technical pure (n-)	++	++	++	-	++	+
Butyl acetate	++	+	+	-	-	--
Butyric acid	-	--	--	--	--	--
Calcium carbonate, aquaous, saturated	++	++	++	++	++	++
Calcium chloride, aquaous	++	++	++	++	++	++
Calcium hydroxide, concentrated	++	++	++	++	++	++
Calcium hypochlorite, saturated	++	++	++	++	++	++
Calcium nitrate, aquaous, saturated	++	++	++	0	++	++
Calcium sulphate, saturated	++	++	++	++	++	++
Carbazole	++	++	++	++	++	++
Carbon dioxide	++	++	0	0	++	++
Carbon disulphide	--	--	--	--	--	--
Carbon tetrachloride	-	--	--	--	--	--
Cellosolve acetate	++	++	++	+	++	+
Chlorinated water	-	0	0	--	-	--
chlorine, gaseous, anhydrous	-	--	-	--	--	0
Chlorobenzene	-	--	-	--	-	--
Chloroform	-	--	--	--	+	-
Chromic acid, 10 %	++	++	++	++	++	++
Chromosulphuric acid	--	--	-	--	--	--
Citric acid, 10 %	++	++	++	++	++	++
Cresol	-	--	--	--	+	-
Crude oil	+	+	+	0	+	-
Cyclohexane	-	--	-	--	-	--
Cyclohexanol	+	+	+	+	+	-
Decalin (Decahydronaphthalene)	++	+	+	--	+	--
Diammonium hydrogen phosphate	++	++	++	++	++	++
Dibutyl phthalate	++	-	-	-	+	+

# CHEMICAL RESISTANCE

Chemical substance	HDPE		LDPE		PP	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Dichlorobenzene	-	-	-	--	-	--
Diesel fuel	+	+	+	0	+	+
Diethyl ether	-	--	--	--	--	--
Diethylbenzene	-	--	--	--	--	--
Dimethylformamide	++	++	++	-	++	++
Dioxin, 1,4	+	+	+	-	-	-
Ethanol, 50 %	++	++	++	++	++	++
Ethanol, 96 %	++	++	-	++	++	++
Ether	-	--	--	--	--	--
Ethyl acetate	++	-	-	--	++	-
Ethyl acrylate, 100 %	--	--	--	--	--	--
Ethyl chloride	-	-	-	--	-	--
Ethyl ether, technical pure	-	0	+	-	--	--
Ethylbenzene	+	-	-	--	-	--
Ethylene glycol (PEG)	++	++	++	++	++	++
Ethylene oxide	+	-	-	-	-	-
Film developer	++	-	++	++	++	+
Film fixing bath	++	0	++	++	++	++
Fluorides	++	++	++	++	++	++
Fluorine	--	--	--	--	--	--
Formaldehyde, 40 %	++	+	+	-	++	+
Formic acid, 98-100 %	++	++	++	+	++	-
Fuel oil (domestic)	-	-	-	--	++	-
Glucose	++	++	++	++	++	++
Glycerin	++	++	++	++	++	++
Glycol	+	+	+	+	+	+
Heptane, n-	+	-	-	--	+	--
Hexane, n-	+	-	--	--	+	-
Hydraulic oil	+	+	0	0	+	+
Hydrazine hydrate, aquaous	++	++	++	0	++	++
Hydrobromic acid	++	++	++	+	++	+
Hydrochloric acid, 20 %	++	++	++	++	++	++
Hydrocyanic acid, aquaous	++	++	++	++	++	++
Hydrofluoric acid, 50 %	++	++	++	++	++	++
Hydrogen peroxide, 10 %	+	+	+	+	+	+
Hydrogen peroxide, 30 %	-	+	+	+	+	+
Iodine tincture	++	-	++	-	++	+
Isopropanol, technical pure	++	++	++	++	++	++

+ good resistance (less damage of the material)

- poor resistance (not recommended)

0 no value existing

++ very good resistance (virtually no damage of the material)

-- no resistance (heavy damage up to the complete destruction of the material)



Chemical substance	HDPE		LDPE		PP	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Isopropyl acetate	++	+	+	-	+	-
Kerosine	+	+	-	--	-	-
Kerosine, technical pure	++	-	-	--	++	-
Lactic acid, 85 %	++	++	++	++	++	+
Lanolin (wool fat), technical pure	++	-	++	-	++	-
Lead acetate, aquaous	++	++	++	++	++	++
Lemon juice	+	+	+	0	+	+
Linseed oil	+	+	+	0	+	+
Lubricant oils	++	-	+	-	-	0
Machine oil, 100 %	0	0	++	--	++	-
Menthol, 100 %	++	-	-	--	++	-
Mercury chloride	++	++	++	++	++	++
Mercury, pure	++	++	++	++	++	++
Metal salts, generally, dissolved	++	++	++	++	++	++
Methane, gaseous	+	+	+	0	+	+
Methanol	++	++	++	++	++	++
Methyl acetate, 100 %	++	0	++	++	++	-
Methyl ethyl ketone (MEK)	++	-	-	--	++	-
Methylene chloride	--	--	--	--	-	--
Milk	+	+	+	+	+	+
Mineral oil	++	++	+	--	++	-
Monochloroacetic acid	++	++	++	++	++	+
Naphthalene, 100 %	+	-	--	0	0	0
Nitric acid, 50 %	+	--	-	--	-	--
Nitrobenzene	-	--	--	--	+	--
Octane, n-	++	++	++	++	++	++
Oils and fats, herbal	++	-	++	-	++	-
Oleic acid	+	-	+	-	+	+
Olive oil	+	+	+	0	+	+
Oxalic acid	++	++	++	++	++	++
Paraffin oil, 100 %	+	+	+	0	+	+
Paraffin, 100 %	+	+	+	0	+	+
Perchlorethylene (PER)	--	--	--	--	--	--
Perchloric acid	+	--	+	--	+	--
Petrol	+	-	-	--	-	--
Phenol, 100 %	+	-	-	-	++	+
Phenylhydrazine, technical pure	-	0	0	0	-	--
Phosphoric acid, 85 %	++	++	++	++	++	+

# CHEMICAL RESISTANCE

Chemical substance	HDPE		LDPE		PP	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Pine needle oil, 100 %	+	+	+	0	+	+
Potassium carbonate, aquaous, saturated	+	+	+	+	+	+
Potassium chloride, aquaous, saturated	+	+	+	+	+	+
Potassium hydroxide solution, 50 %	++	++	++	++	++	++
Potassium nitrate, aquaous, saturated	+	+	+	+	+	+
Potassium perchlorate, saturated	++	++	++	++	++	++
Potassium permanganate	++	-	++	++	++	++
Potassium sulphate, aquaous, saturated	+	+	0	0	+	+
Propane, gaseous	-	--	--	--	+	--
Propane, liquid	+	+	+	+	+	+
Propylene glycol (PG)	++	++	++	++	++	++
Propylene oxide	++	++	++	+	++	+
Pyridine	++	-	0	+	-	-
Resorcin, saturated	++	++	++	++	++	++
Salicylic acid, saturated	++	++	++	++	++	++
Salicylic aldehyde	++	++	++	+	++	+
Sea water	+	+	+	+	+	+
Silicone oil	+	+	+	+	+	+
Silver acetate	++	++	++	++	++	++
Silver nitrate	++	++	++	+	++	+
Sodium acetate	++	++	++	++	++	++
Sodium bisulfite, aquaous, saturated	+	+	0	0	+	+
Sodium carbonate	++	++	++	++	++	++
Sodium chlorate, aquaous, 25 %	+	+	0	0	+	+
Sodium chloride	++	++	++	++	++	++
Sodium dichromate	0	0	++	++	++	++
Sodium hydroxide, 100 % (caustic soda)	+	+	+	0	+	-
Sodium hydroxide, 50 % (soda lye)	++	++	++	++	++	++
Sodium hypochloride, 15 %	++	++	++	++	++	++
Sodium hypochloride, 50 %	-	-	-	-	-	-
Sodium thiosulphate (fixing salt), saturated	+	+	0	0	+	+
Softener, generally	++	-	++	-	++	-
Soya oil	+	+	+	0	+	+
Stearic acid, crystalline	++	-	++	-	++	-
Sulphur dioxide, humid	++	++	++	++	++	-
Sulphuric acid, 95 %	-	--	-	--	-	--
Tar	+	0	0	0	+	0
Tetrahydrofuran	-	--	--	--	-	--

+ good resistance (less damage of the material)

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0 no value existing

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Chemical substance	HDPE		LDPE		PP	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Thionyl chloride, technical pure	--	--	--	--	--	--
Toluene	-	--	-	--	+	--
Trichlorethylene, 100 %	-	--	--	--	--	--
Turpentine oil	+	+	-	--	--	--
Urea	++	++	++	++	++	++
Vinyl chloride, technical pure	0	0	0	0	-	-
Water	++	++	++	++	++	++
White spirit	+	+	+	+	+	+
Xylene	--	--	-	--	--	0

**Source:**

[www.craemer.com/fileadmin/templates/downloads/diverse/Chemische\\_Bestaendigkeit.pdf](http://www.craemer.com/fileadmin/templates/downloads/diverse/Chemische_Bestaendigkeit.pdf)  
[www.3d-plastic.eu/shop\\_3d-plastic/images/Chemikalienbestaendigkeit\\_PA+PE+PP+PVC.pdf](http://www.3d-plastic.eu/shop_3d-plastic/images/Chemikalienbestaendigkeit_PA+PE+PP+PVC.pdf)

## PROPERTIES OF GLASS

### BOROSILICATE GLASS 3.3

#### Chemical resistance

Excellent resistance to acids, salt solutions, organic substances and halogens such as chlorine and bromine. Relatively resistant to alkalis and poorly resistant to hydrofluoric acid, concentrated phosphoric acid and strong alkaline solutions/lyes at high temperatures.

#### Temperature resistance

Unaffected by sudden fluctuations in temperature. Also suitable for long-term use at temperatures above 100 °C.

#### Chemical composition

- ca. 80 % silicon dioxide (SiO<sub>2</sub>)
- ca. 13 % boron trioxide (B<sub>2</sub>O<sub>3</sub>)
- ca. 4.5 % sodium oxide (Na<sub>2</sub>O) + potassium oxide (K<sub>2</sub>O)
- ca. 2.5 % aluminium oxide (Al<sub>2</sub>O<sub>3</sub>)

#### Physical data

- Density ca. 2.23 g · cm<sup>-3</sup>
- Thermal coefficient of linear expansion 3.3 · 10<sup>-6</sup> K<sup>-1</sup>
- Heat conductivity (20 to 100 °C) 1.2 W · m<sup>-1</sup> · K<sup>-1</sup>
- Maximum short-term permissible working range 500 °C
- Hardness (acc. to Mohs) ca. 6°

### SODA-LIME GLASS

#### Chemical resistance

Chemical resistance is worse than that of borosilicate glass 3.3.

#### Temperature resistance

Sensitive to temperature fluctuations, since irregular heating causes stress in the glass and can therefore lead to breakage. For this reason, it is not used in the laboratory sector for applications involving large changes in temperature.

#### Chemical composition (main components)

- 71 – 75 % silicon dioxide (SiO<sub>2</sub>)
- 12 – 16 % sodium oxide (Na<sub>2</sub>O)
- 10 – 15 % calcium oxide (CaO)

#### Physical data

- Density ca. 2.5 g · cm<sup>-3</sup>
- Thermal coefficient of linear expansion 9 · 10<sup>-6</sup> K<sup>-1</sup>
- Heat conductivity 0.8 – 1.05 W · m<sup>-1</sup> · K<sup>-1</sup>

## PROPERTIES OF COMMON PLASTICS

Material	Temperature resistance °C	Density g/cm <sup>3</sup>	Flexibility	Autoclaveable	Fumigation*	Disinfecting agents**
LDPE	80	0.92	Very good	No	Yes	Yes
HDPE	120	0.95	Poor	No	Yes	Yes
PP	135	0.9	Poor	Yes	Yes	Yes

\* Ethylene oxide (EO) or formaldehyde

\*\* Aqueous formaldehyde solution or ethanol etc.

## DIFFERENCES AND SIMILARITIES OF LABSOLUTE® SCREW CAPS



Red



Blue, Green, Yellow, Purple, Grey

Lid	PBT	PP
Seal	Silicon seal with PTFE coating	Integrated lip seal
Pouring ring	PBT	PP
Temperature-resistant	Up to 200 °C	Up to 135 °C
Dry-sterilisable	Yes	No
Autoclavable	Yes	Yes

## GREEN SOLVENTS FOR SUSTAINABLE CHEMISTRY

We support the concept of Green Chemistry and the growing awareness of the environmental impacts of chemical products and their production processes. Green Solvents are a vital part of sustainable chemistry. Besides obvious “green” solvents such as water and ethanol, CHEMSOLUTE® contains “green” alternatives to commonly used solvents.

Paul Anastas and John C. Warner developed the practice of Green Chemistry by formulating the 12 principles of the US Environmental Protection Agency (EPA):



### GREEN CHEMISTRY - THE 12 PRINCIPLES

- Waste prevention instead of treating or cleaning up waste
- Atom economy and atom efficiency
- Less hazardous chemical syntheses
- Design safer chemicals
- Safer solvents and auxiliaries
- Design for energy efficiency
- Use of renewable feedstocks
- Reduce derivatives
- Catalytic reagents instead of stoichiometric reagents
- Design products for degradation
- Real-time analysis for pollution prevention
- Inherently safer chemistry for accident prevention



## GREEN SOLVENTS AS AN ALTERNATIVE TO:

Art. no.	Description	DCM (Dichloromethane)	THF (Tetrahydrofuran)	DMSO (Dimethyl sulfoxide)	DMF (Dimethylformamide)	MTBE (tert-Butyl methyl ether)	1,4-Dioxane	Diethyl ether	Toluene	Xylene	HMPT (Hexamethylphosphoric triamide)	Petroleum derivatives
2497	CPME (Cyclopentylmethyl ether)		x			x	x	x				
2327	DMPU (N,N'-Dimethylpropylene urea)				x						x	
2314	1,3-Dioxolane	x	x	x					x	x		
1180	1,3-Propanediol											x
1474	2-Methyltetrahydrofuran	x	x									
1483	2-Methyltetrahydrofuran	x	x									

## GLOBALLY HARMONIZED SYSTEM (GHS) SYMBOLS, HAZARD AND PRECAUTIONARY STATEMENTS

### GHS Symbols



GHS01

GHS02

GHS03

GHS04

GHS05



GHS06

GHS07

GHS08

GHS09

### Hazard statements (H-Phrases)

Hazard statements for physical hazards	
H200	Unstable explosives.
H201	Explosive; mass explosion hazard.
H202	Explosive, severe projection hazard.
H203	Explosive; fire, blast or projection hazard.
H204	Fire or projection hazard.
H205	May mass explode in fire.
H220	Extremely flammable gas.
H221	Flammable gas.
H222	Extremely flammable aerosol.
H223	Flammable aerosol.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H229	Pressurised container: May burst if heated.
H230	May react explosively even in the absence of air.
H231	May react explosively even in the absence of air at elevated pressure and/or temperature.
H240	Heating may cause an explosion.
H241	Heating may cause a fire or explosion.
H242	Heating may cause a fire.
H250	Catches fire spontaneously if exposed to air.
H251	Self-heating: may catch fire.
H252	Self-heating in large quantities; may catch fire.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H261	In contact with water releases flammable gases.
H270	May cause or intensify fire; oxidiser.
H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H280	Contains gas under pressure; may explode if heated.
H281	Contains refrigerated gas; may cause cryogenic burns or injury.
H290	May be corrosive to metals.

### Hazard statements for health hazards

H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H341	Suspected of causing genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H350	May cause cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H350i	May cause cancer by inhalation.
H351	Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H360	May damage fertility or the unborn child <state specific effect if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H360D	May damage the unborn child.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H360F	May damage fertility.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H361	Suspected of damaging fertility or the unborn child <state specific effect if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H362	May cause harm to breast-fed children.
H370	Causes damage to organs <state specific effect if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H371	May cause damage to organs <or state all organs affected, if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H372	Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H373	May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H300+ H310	Fatal if swallowed or in contact with skin.
H300+ H330	Fatal if swallowed or if inhaled.
H300+ H310+ H330	Fatal if swallowed, in contact with skin or if inhaled.
H301+ H311	Toxic if swallowed or in contact with skin.
H301+ H331	Toxic if swallowed or if inhaled.
H301+ H311+ H331	Toxic if swallowed, in contact with skin or if inhaled.
H302+ H312	Harmful if swallowed or in contact with skin.
H302+ H312+ H332	Harmful if swallowed, in contact with skin or if inhaled.
H302+ H332	Harmful if swallowed or if inhaled.
H310+ H330	Fatal in contact with skin or if inhaled.
H311+ H331	Toxic in contact with skin or if inhaled.
H312+ H332	Harmful in contact with skin or if inhaled.

#### Hazard statements for environmental hazards

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
H420	Harms public health and the environment by destroying ozone in the upper atmosphere.

#### EUH Phrases

EUH001	Explosive when dry.
EUH014	Reacts violently with water.
EUH018	In use may form flammable/explosive vapour-air mixture.
EUH019	May form explosive peroxides.
EUH029	Contact with water liberates toxic gas.
EUH031	Contact with acids liberates toxic gas.
EUH032	Contact with acids liberates very toxic gas.
EUH044	Risk of explosion if heated under confinement.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH070	Toxic by eye contact.
EUH071	Corrosive to the respiratory tract.
EUH201	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
EUH201A	Warning! Contains lead.
EUH202	Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.
EUH203	Contains chromium (VI). May produce an allergic reaction.
EUH204	Contains isocyanates. May produce an allergic reaction.
EUH205	Contains epoxy constituents. May produce an allergic reaction.
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).
EUH207	Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions.
EUH208	Contains <name of sensitising substance>. May produce an allergic reaction.
EUH209	Can become highly flammable in use.
EUH209A	Can become flammable in use.
EUH210	Safety data sheet available on request.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Source: Regulation (EG) No. 1272/2008 and changes to commission regulation (EU) No. 605/2014 of the 5 June 2014 and the correction of regulation (EG) No. 1272/2008 official journal (94,58.Ig.) of the 10 April 2015.

## GLOBALLY HARMONIZED SYSTEM (GHS) SYMBOLS, HAZARD AND PRECAUTIONARY STATEMENTS

### GHS Symbols



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### Precautionary statements (P-Phrases)

General	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
Precautionary statements – Prevention	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P220	Keep away from clothing and other combustible materials.
P222	Do not allow contact with air.
P223	Do not allow contact with water.
P230	Keep wetted with ...
P231	Handle and store contents under inert gas/...
P232	Protect from moisture.
P233	Keep container tightly closed.
P234	Keep only in original packaging.
P235	Keep cool.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P244	Keep valves and fittings free from oil and grease.
P250	Do not subject to grinding/shock/friction/...
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P263	Avoid contact during pregnancy and while nursing.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.

P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P282	Wear cold insulating gloves and either face shield or eye protection.
P283	Wear fire resistant or flame retardant clothing.
P284	[In case of inadequate ventilation] wear respiratory protection.
P231+ P232	Handle and store contents under inert gas/... Protect from moisture.

### Precautionary statements – Response

P301	IF SWALLOWED:
P302	IF ON SKIN:
P303	IF ON SKIN (or hair):
P304	IF INHALED:
P305	IF IN EYES:
P306	IF ON CLOTHING:
P308	IF exposed or concerned:
P310	Immediately call a POISON CENTER/doctor/...
P311	Call a POISON CENTER/doctor/...
P312	Call a POISON CENTER/doctor/... if you feel unwell.
P313	Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P315	Get immediate medical advice/attention.
P320	Specific treatment is urgent (see ... on this label).
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P332	If skin irritation occurs:
P333	If skin irritation or rash occurs:
P334	Immerse in cool water [or wrap in wet bandages].
P335	Brush off loose particles from skin.
P336	Thaw frosted parts with lukewarm water. Do not rub affected area.
P337	If eye irritation persists:
P338	Remove contact lenses, if present and easy to do. Continue rinsing.
P340	Remove person to fresh air and keep comfortable for breathing.
P342	If experiencing respiratory symptoms:
P351	Rinse cautiously with water for several minutes.
P352	Wash with plenty of water/...
P353	Rinse skin with water [or shower].
P360	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P361	Take off immediately all contaminated clothing.
P362	Take off contaminated clothing.
P363	Wash contaminated clothing before reuse.
P364	And wash it before reuse.
P370	In case of fire:
P371	In case of major fire and large quantities:
P372	Explosion risk.
P373	DO NOT fight fire when fire reaches explosives.
P375	Fight fire remotely due to the risk of explosion.
P376	Stop leak if safe to do so.



P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.	P370+	
P378	Use... to extinguish.	P380+	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. [Use ... to extinguish].
P380	Evacuate area.	P375	
P381	In case of leakage, eliminate all ignition sources.	[+ P378]	
P390	Absorb spillage to prevent material damage.	P371+	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P391	Collect spillage.	P380+	
P301+		P375	
P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...	<b>Precautionary statements – Storage</b>	
P301+		P401	Store in accordance with...
P312	IF SWALLOWED: Immediately call a POISON CENTER/doctor/... if you feel unwell.	P402	Store in a dry place.
P301+		P403	Store in a well-ventilated place.
P330+		P404	Store in a closed container.
P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.	P405	Store locked up.
P302+		P406	Store in a corrosion resistant/... container with a resistant inner liner.
P334	IF ON SKIN: Immerse in cool water or wrap in wet bandages.	P407	Maintain air gap between stacks or pallets.
P302+		P410	Protect from sunlight.
P352	IF ON SKIN: Wash with plenty of water/...	P411	Store at temperatures not exceeding ... °C/ ... °F.
P302+		P412	Do not expose to temperatures exceeding 50 °C/122 °F.
P335+		P413	Store bulk masses greater than ... kg/... lbs at temperatures not exceeding ... °C/... °F.
P334	IF ON SKIN: Immerse in cool water [or wrap in wet bandages].	P420	Store separately.
P303+		P402+	
P361+		P404	Store in a dry place. Store in a closed container.
P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].	P403+	
P304+		P233	Store in a well-ventilated place. Keep container tightly closed.
P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.	P403+	
P305+		P235	Store in a well-ventilated place. Keep cool.
P351+		P410+	
P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	P403	Protect from sunlight. Store in a well-ventilated place.
P306+		P410+	
P360	IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.	P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P308+		<b>Precautionary statements – Disposal</b>	
P311	IF exposed or concerned: Call a POISON CENTER/doctor/...	P501	Dispose of contents/container to (in accordance with local/regional/national/international regulations.)
P308+		P502	Refer to manufacturer or supplier for information on recovery or recycling.
P313	IF exposed or concerned: Get medical advice/attention.		
P332+			
P313	If skin irritation occurs: Get medical advice/attention.		
P333+			
P313	If skin irritation or rash occurs: Get medical advice/attention.		
P336+			
P315	Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.		
P337+			
P313	If eye irritation persists: Get medical advice/attention.		
P342+			
P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...		
P361+			
P364	Take off immediately all contaminated clothing and wash it before reuse.		
P362+			
P364	Take off contaminated clothing and wash it before reuse.		
P370+			
P376	In case of fire: Stop leak if safe to do so.		
P370+			
P378	In case of fire: Use ... to extinguish.		
P370+			
P380+	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.		
P375			
P370+			
P372+	In case of fire: Explosion risk. Evacuate area.		
P380+	DO NOT fight fire when fire reaches explosives.		
P373			

**Source:** Regulation (EG) No. 1272/2008 and changes to commission regulation (EU) No. 605/2014 of the 5 June 2014 and the correction of regulation (EG) No. 1272/2008 official journal (94,58.lg.) of the 10 April 2015.

# THREAD SIZES OF OUR PACKAGING FOR CHEMICALS

Art. no.	Thread	Art. no.	Thread	Art. no.	Thread	Art. no.	Thread
105.0250	DIN 45	710.2500	DIN 45	831.2500	DIN 45	1008.0050	DIN 32
105.1000	DIN 54	715.1000	DIN 45	836.1000	DIN 45	1024.1000	DIN 45
110.1000	DIN 54	715.2500	DIN 45	836.2500	DIN 45	1024.2500	DIN 45
112.1000	DIN 54	726.0250	22 mm	836.2511	DIN 45	1048.0250	DIN 45
120.1011	GL 45	728.1000	DIN 45	836.5000	DIN 51	1056.1000	DIN 45
123.1000	DIN 54	728.2500	DIN 45	836.9020	DIN 61	1101.0500	45 mm
129.0100	DIN 32	733.2500	DIN 45	838.1011	ISO 45	1103.1000	45 mm
133.0100	DIN 32	738.9025	Nr. 61	838.2500	DIN 45	1103.2500	DIN 45
133.0250	DIN 45	739.2500	DIN 45	841.1000	DIN 45	1105.0025	28 mm
320.1000	42 mm	741.2500	DIN 45	845.1000	DIN 45	1107.0025	28 mm
320.5000	DIN 50	741.9025	2" + 3/4"	850.1000	DIN 45	1107.0100	35 mm
326.1000	DIN 45	752.1000	DIN 45	853.2500	45 mm	1109.1000	DIN 80
326.2500	DIN 45	752.2500	DIN 45	853.2511	45 mm	1111.1000	DIN 45
326.5000	DIN 51	752.8025	DIN 61	855.1000	DIN 45	1112.1000	DIN 45
326.9010	60 mm	752.9025	2" + 3/4"	857.1011	ISO 45	1113.1000	DIN 45
326.9025	2" + 3/4"	752.9200	2" + 3/4"	859.1000	45 mm	1114.1000	DIN 45
371.5000	42 mm	760.1000	DIN 45	859.2500	DIN 45	1114.5000	31 mm
410.9020	DIN 61	769.0025	18 mm	859.5000	36 mm	1115.1000	DIN 45
418.1000	ISO 45	775.1000	ISO 45	860.1000	DIN 45	1116.1000	DIN 45
418.2500	DIN 45	782.0500	ISO 45	863.1011	ISO 45	1117.1000	DIN 45
437.1011	DIN 45	790.1000	DIN 45	865.1000	DIN 45	1117.5000	31 mm
445.9030	Nr. 61	790.2500	DIN 45	865.2500	DIN 45	1118.1000	DIN 45
452.2500	45 mm	797.1000	ISO 45	869.9010	Nr. 51	1119.1000	DIN 45
452.2511	45 mm	797.2500	DIN 45	871.1000	DIN 45	1119.5000	31 mm
455.1000	ISO 45	803.1011	GL 45	871.2500	DIN 45	1120.1000	DIN 45
455.2500	DIN 45	804.1000	DIN 54	874.1000	DIN 45	1120.5000	31 mm
456.1000	ISO 45	807.1000	DIN 45	874.2500	DIN 45	1121.1000	DIN 45
456.2500	DIN 45	808.1011	GL 45	874.5000	DIN 51	1122.0500	45 mm
464.5000	38 mm	809.9020	Nr. 61	874.9025	DIN 61	1123.0252	24 mm
469.5000	42 mm	811.1000	ISO 45	878.0050	32 mm	1124.1000	ISO 45
469.9010	42 mm	811.2500	DIN 45	878.0250	45 mm	1125.0252	24 mm
470.1000	DIN 45	815.1000	DIN 45	881.1000	DIN 45	1125.1012	28 mm
470.2500	DIN 45	818.1000	DIN 45	884.1011	DIN 45	1126.1012	28 mm
476.1011	DIN 45	819.1011	GL 45	887.0100	DIN 32	1127.1000	ISO 45
476.2511	DIN 45	820.2511	DIN 45	889.9010	DIN 45	1128.0252	24 mm
480.1011	DIN 28	822.2500	DIN 45	892.1011	DIN 45	1128.1012	28 mm
480.5000	Nr. 45	825.2511	DIN 45	892.2500	DIN 45	1129.1000	ISO 45
480.9010	Nr. 45	827.1011	DIN 45	892.2511	DIN 45	1130.1000	ISO 45
480.9020	Nr. 61	827.2511	DIN 45	892.9025	DIN 61	1131.0252	24 mm
535.5000	RD 80	829.2500	45 mm	898.9070	Nr. 71	1131.1012	28 mm
697.2500	DIN 45	829.2511	45 mm	990.0010	DIN 32	1132.0252	24 mm

# THREAD SIZES OF OUR PACKAGING FOR CHEMICALS

Art. no.	Thread	Art. no.	Thread	Art. no.	Thread	Art. no.	Thread
1132.1012	28 mm	1164.2500	DIN 45	1305.1000	DIN 45	1348.1000	DIN 54
1134.0252	24 mm	1166.9125	2" + 3/4"	1305.2500	DIN 45	1348.5000	DIN 80
1134.1012	28 mm	1169.0500	45 mm	1306.9076	Nr. 71	1350.1000	DIN 45
1135.1000	45 mm	1171.1000	ISO 45	1307.0500	DIN 54	1352.1000	32 mm
1136.1000	DIN 45	1176.1000	DIN 45	1307.1000	DIN 54	1353.1000	DIN 54
1136.2500	DIN 45	1176.5000	DIN 54	1307.5000	DIN 80	1354.1000	DIN 54
1136.2511	DIN 45	1176.9025	2" + 3/4"	1308.0100	DIN 32	1355.1000	54 mm
1136.5000	DIN 51	1178.1000	ISO 45	1309.0500	DIN 54	1355.5000	80 mm
1136.9025	2" + 3/4"	1178.2500	DIN 45	1309.1000	DIN 54	1356.1000	DIN 45
1136.9050	2" + 3/4"	1179.1000	DIN 45	1310.1000	DIN 54	1357.1000	DIN 54
1136.9200	2" + 3/4"	1179.2500	DIN 45	1310.2500	DIN 80	1357.5000	DIN 80
1137.0252	24 mm	1180.1000	ISO 45	1310.5000	DIN 80	1359.0100	DIN 32
1137.1012	28 mm	1180.5000	42 mm	1311.1000	DIN 54	1359.0500	DIN 54
1138.2500	45 mm	1182.2500	DIN 45	1312.1011	GL 45	1365.1000	DIN 54
1138.5000	45 mm	1182.5000	DIN 51	1313.0250	DIN 45	1367.1000	DIN 54
1138.9025	60 mm	1182.9025	2" + 3/4"	1313.1000	DIN 54	1367.5000	RD 80
1138.9200	2" + 3/4"	1184.1000	25 mm	1315.1000	ISO 45	1369.1000	DIN 45
1139.0500	45 mm	1184.9025	61 mm	1316.0100	DIN 32	1373.0500	DIN 54
1140.0252	24 mm	1185.1000	DIN 45	1319.1000	DIN 54	1373.1000	DIN 54
1140.1012	28 mm	1185.2500	DIN 45	1320.1000	63 mm	1376.9010	Nr. 51
1143.1000	45 mm	1186.2500	45 mm	1320.5000	115 mm	1377.0100	DIN 32
1145.2500	DIN 45	1186.9025	2" + 3/4"	1321.1011	GL 45	1377.1000	DIN 54
1146.0250	DIN 45	1188.1000	ISO 45	1322.1000	DIN 54	1379.0250	DIN 45
1147.1000	DIN 45	1188.2500	DIN 45	1322.5000	DIN 80	1380.9030	Nr. 61
1147.2500	DIN 45	1194.1000	ISO 47	1324.9030	Nr. 61	1381.2511	DIN 45
1150.1000	25 mm	1194.2500	ISO 48	1328.1000	DIN 54	1382.0500	DIN 54
1150.5000	45 mm	1194.5000	ISO 49	1329.0500	DIN 54	1382.2500	DIN 80
1150.9010	45 mm	1194.9025	ISO 50	1329.1000	DIN 54	1383.1000	DIN 54
1150.9025	61 mm	1195.9025	ISO 51	1329.2500	DIN 80	1384.1000	DIN 54
1151.0500	45 mm	1197.1000	ISO 52	1331.1000	DIN 45	1384.5000	DIN 80
1152.2500	DIN 45	1197.5000	RD 45 mm	1333.1000	DIN 45	1385.0500	DIN 54
1155.9200	2" + 3/4"	1197.9010	RD 45 mm	1334.1000	DIN 54	1385.1000	DIN 54
1156.2500	32 mm	1197.9025	2" + 3/4"	1335.1000	DIN 45	1386.0100	DIN 32
1157.1000	DIN 45	1198.2511	ISO 53	1338.0025	35 mm	1388.0500	DIN 54
1157.5000	DIN 51	1198.9025	DIN 61	1339.1000	54 mm	1388.1000	DIN 54
1157.9025	DIN 61	1199.1000	ISO 54	1340.1000	DIN 45	1389.0025	DIN 32
1159.0100	DIN 32	1199.1009	28 mm	1342.1000	DIN 54	1389.0100	DIN 32
1160.9180	2" + 3/4"	1199.5000	ISO 55	1344.1000	DIN 54	1390.2511	DIN 45
1162.1000	ISO 45	1205.0025	35 mm	1346.1000	DIN 54	1390.5011	DIN 51
1162.2500	DIN 45	1230.5000	DIN 51	1347.0100	DIN 32	1390.9010	DIN 51
1164.1000	ISO 45	1300.1011	GL 45	1347.1000	DIN 54	1390.9020	DIN 61

# THREAD SIZES OF OUR PACKAGING FOR CHEMICALS

Art. no.	Thread	Art. no.	Thread	Art. no.	Thread	Art. no.	Thread
1390.9025	DIN 61	1464.2500	DIN 45	1632.0500	DIN 54	1857.2500	DIN 45
1391.9025	DIN 61	1471.1000	ISO 45	1632.1000	DIN 54	1870.1000	ISO 45
1393.1000	DIN 54	1471.2500	DIN 45	1633.1000	DIN 45 E	1871.1011	GL 45
1393.2500	DIN 80	1474.1000	ISO 45	1634.1000	DIN 54	1873.1000	ISO 45
1394.0250	DIN 45	1474.2500	DIN 45	1634.5000	DIN 80	1905.0025	DIN 45
1394.1000	DIN 54	1480.9025	48 mm	1636.1000	DIN 54	1906.0025	35 mm
1405.1000	DIN 54	1481.1000	ISO 45	1648.0250	DIN 45	1909.0100	24 mm
1408.2500	45 mm	1481.2500	DIN 45	1648.1000	DIN 54	1909.0500	ISO 45
1408.2511	45 mm	1483.1000	ISO 45	1648.5000	DIN 80	1918.0025	18 mm
1410.0100	DIN 32	1483.2500	DIN 45	1655.1000	DIN 54	1929.1000	DIN 45
1411.5000	DIN 45	1483.5000	42 mm	1655.5000	DIN 80	1929.2500	DIN 45
1415.5000	45 mm	1485.1000	DIN 45	1660.0500	DIN 54	1929.9025	2" + 3/4"
1418.0250	DIN 45	1485.2500	DIN 45	1661.1000	DIN 54	1935.1000	DIN 45
1418.1000	DIN 54	1487.1000	DIN 54	1662.1011	GL 45	1948.1000	ISO 45
1420.0250	DIN 45	1505.0100	45 mm	1663.1000	ISO 45	1948.2500	DIN 45
1420.1000	DIN 54	1544.1000	DIN 54	1665.1000	63 mm	1948.9025	2" + 3/4"
1420.5000	DIN 80	1570.0500	DIN 45 E	1669.0100	DIN 32	1964.1000	ISO 45
1423.1000	DIN 54	1575.0500	DIN 45 E	1672.0500	DIN 54	1964.2500	DIN 45
1423.5000	DIN 80	1580.0500	DIN 45 E	1673.1000	DIN 54	1966.9200	2" + 3/4"
1424.2500	DIN 45	1602.1000	DIN 45	1675.1000	DIN 45	1968.2500	DIN 45
1428.1000	ISO 45	1604.1000	DIN 45	1675.2500	DIN 45	1973.1000	DIN 45
1428.2500	DIN 45	1608.1011	GL 45	1678.1000	DIN 54	1973.2500	DIN 45
1437.1011	DIN 45	1609.0100	DIN 32	1678.5000	DIN 80	1975.5011	42 mm
1437.2511	DIN 45	1609.0500	DIN 54	1679.0250	DIN 45	2020.9025	Nr. 61
1437.9025	DIN 61	1610.0250	DIN 45	1681.1000	DIN 54	2039.1000	DIN 45
1437.9050	2" + 3/4"	1610.1000	DIN 54	1681.5000	DIN 80	2050.1011	DIN 45
1437.9200	2" + 3/4"	1611.1000	DIN 45	1683.0500	DIN 54	2134.5000	DIN 45
1443.1000	ISO 45	1612.1011	GL 45	1683.1000	DIN 54	2135.1000	28 mm
1443.1011	ISO 45	1613.1000	DIN 54	1683.5000	DIN 80	2135.5000	DIN 45
1443.2500	DIN 45	1616.1000	55,2 mm	1685.1000	DIN 54	2135.9010	DIN 51
1448.1000	DIN 45	1616.5000	38 mm	1688.0100	DIN 32	2137.1011	DIN 45
1448.2500	DIN 45	1618.0250	DIN 45	1689.0500	DIN 54	2137.2511	DIN 45
1451.1000	ISO 45	1619.1000	DIN 45 E	1689.1000	DIN 54	2137.9025	DIN 61
1451.2500	DIN 45	1619.5000	38 mm	1695.1000	DIN 54	2140.1000	DIN 45
1455.2500	DIN 45	1621.1000	DIN 54	1697.1000	DIN 54	2140.5000	DIN 45
1459.1000	ISO 45	1622.0500	DIN 54	1697.5000	DIN 80	2163.1000	DIN 45
1459.2500	DIN 45	1624.1011	GL 45	1805.1000	DIN 45	2163.2500	DIN 45
1462.1011	DIN 45	1625.1000	DIN 45	1805.2500	DIN 45	2170.1000	ISO 45
1462.2511	DIN 45	1627.0100	DIN 32	1810.1000	DIN 45	2175.1000	ISO 45
1462.9025	DIN 61	1627.1000	DIN 54	1831.1000	ISO 45	2202.1000	25 mm
1464.1000	DIN 45	1630.1000	DIN 54	1857.1000	DIN 45	2202.5000	45 mm

# THREAD SIZES OF OUR PACKAGING FOR CHEMICALS

Art. no.	Thread	Art. no.	Thread	Art. no.	Thread	Art. no.	Thread
2202.9010	45 mm	2236.2500	OV 45	2284.1000	DIN 45	2385.2500	DIN 45
2202.9025	61 mm	2237.1000	ISO 45	2286.1000	ISO 45	2403.0500	DIN 54
2202.9200	2" + 3/4"	2237.2500	DIN 45	2286.2500	DIN 45	2403.1000	DIN 54
2203.1000	25 mm	2239.0500	DIN 45 E	2286.5000	42 mm	2405.1000	DIN 54
2203.5000	45 mm	2239.1000	DIN 45 E	2286.9025	48 mm	2407.1000	DIN 54
2204.1000	ISO 45	2241.1000	DIN 54	2289.1000	45 mm	2409.2500	DIN 45
2205.2510	DIN 45	2246.1000	ISO 45	2289.2500	32 mm	2414.1000	DIN 54
2206.5000	DIN 51	2246.2500	DIN 45	2289.9025	58 mm	2417.1000	DIN 54
2206.6025	57 Balg	2246.5000	42 mm	2296.2500	DIN 45	2418.0001	Opening 63 mm
2206.9010	DIN 51	2246.9025	48 mm	2310.0005	28 mm	2419.1011	GL 45
2206.9025	DIN 51	2247.1000	45 mm	2311.2500	DIN 45	2420.1000	DIN 54
2207.1000	ISO 45	2248.5000	DIN 51	2314.1000	ISO 45	2424.9010	Nr. 51
2207.5000	42 mm	2250.1000	DIN 45	2314.5000	42 mm	2425.9025	Nr. 61
2209.1000	K 5446 Menshen	2250.2500	DIN 45	2327.0500	45 mm	2429.2500	DIN 45
2209.5000	RD 45	2253.9045	Nr. 71	2327.1000	ISO 45	2432.1000	DIN 54
2209.9010	RD 45	2254.0250	DIN 45	2331.1000	ISO 45	2435.1000	DIN 54
2209.9025	DIN 60	2254.1000	DIN 54	2333.2500	DIN 45	2440.0001	Opening 120 mm
2209.9200	2" + 3/4"	2257.2500	DIN 45	2335.1000	ISO 45	2442.0100	DIN 32
2210.1000	ISO 45	2257.2511	DIN 45	2340.1000	ISO 45	2445.0500	DIN 54
2211.1000	K 5446 Menshen	2257.5000	50 mm	2343.1000	ISO 45	2445.1000	DIN 54
2211.5000	RD 45	2258.1000	DIN 54	2345.1000	45 mm	2448.2500	DIN 45
2211.9010	RD 45	2262.2500	45 mm	2347.1000	DIN 45	2461.0500	DIN 54
2211.9025	DIN 60	2262.2511	45 mm	2348.1000	ISO 45	2461.1000	DIN 54
2212.5000	DIN 45	2262.5000	45 mm	2350.1000	DIN 45	2461.2500	DIN 80
2212.6025	DIN 57	2265.0100	20 mm	2351.1000	ISO 45	2467.1000	ISO 45
2212.9010	DIN 51	2267.9200	2" + 3/4"	2351.5000	42 mm	2475.1000	DIN 45
2212.9025	DIN 51	2268.2511	DIN 45	2353.1000	ISO 45	2475.2500	DIN 45
2212.9200	2" + 3/4"	2269.1000	ISO 45	2353.2500	DIN 45	2475.9025	2" + 3/4"
2213.1000	DIN 45 E	2273.1000	ISO 45	2355.0500	45 mm	2479.1000	DIN 54
2216.1000	DIN 54	2273.2500	DIN 45	2356.1000	ISO 45	2483.1000	DIN 45
2217.0250	DIN 45	2273.5000	42 mm	2356.2500	DIN 45	2483.2500	DIN 45
2217.1000	DIN 54	2273.9025	48 mm	2358.1000	ISO 45	2485.0500	DIN 54
2219.1000	DIN 45	2274.1000	DIN 54	2361.1000	ISO 45	2489.1000	ISO 45
2219.2500	DIN 45	2276.0100	DIN 32	2362.1000	ISO 45	2489.2500	DIN 45
2220.1011	GL 45	2276.1000	DIN 54	2362.2500	DIN 45	2495.1000	DIN 54
2222.1000	ISO 45	2276.5000	DIN 80	2362.5000	DIN 45	2497.1000	ISO 45
2222.2500	DIN 45	2278.1000	ISO 45	2365.1000	DIN 45	2497.5000	42 mm
2230.0100	20 mm	2279.1000	DIN 45	2371.1000	DIN 45	2502.0500	DIN 54
2235.9200	2" + 3/4"	2279.2500	DIN 45	2371.2500	DIN 45	2502.1000	DIN 54
2236.0500	25 mm	2281.1000	DIN 54	2371.9025	2" + 3/4"	2507.1000	DIN 54
2236.1000	25 mm	2282.9025	DIN 61	2373.1000	ISO 45	2510.1000	ISO 45

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Art. no.	Thread	Art. no.	Thread	Art. no.	Thread	Art. no.	Thread
2513.1000	ISO 45	2642.1000	DIN 54	2692.5000	42 mm	8085.1000	80 mm
2513.2500	DIN 45	2645.1000	ISO 45	2694.1011	DIN 45	8277.0025	DIN 32
2514.1011	GL 45	2645.2500	DIN 45	2697.1000	ISO 45	8614.0500	DIN 54
2515.0500	DIN 54	2647.1000	45 mm	2697.2500	DIN 45	8622.0500	DIN 54
2515.1000	DIN 54	2647.2500	32 mm	2699.0500	DIN 60	8622.1000	DIN 54
2524.1000	ISO 45	2647.5000	36 mm	2749.0500	45 mm	8622.2500	DIN 80
2524.2500	DIN 45	2647.9025	58 mm	2751.0500	45 mm	8622.5000	DIN 80
2529.1000	ISO 45	2649.9200	2" + 3/4"	2752.1000	45 mm	8630.1000	DIN 54
2529.2500	DIN 45	2651.0500	DIN 54	2753.0500	45 mm	8630.5000	DIN 80
2544.1000	DIN 45	2653.1000	ISO 45	2754.0100	26 mm	8690.0250	45 mm
2544.5000	38 mm	2653.2500	DIN 45	2755.1000	45 mm	8694.1000	DIN 54
2544.9010	DIN 60	2654.1000	45 mm	2756.0500	45 mm	8694.2500	DIN 80
2545.5000	38 mm	2654.2500	32 mm	2757.0500	45 mm	8773.0500	DIN 54
2550.9010	DIN 51	2654.5000	45 mm	2759.0500	45 mm	8773.1000	DIN 80
2555.5000	DIN 51	2654.5010	36 mm	2761.0250	25 mm	8779.1400	150 mm + 50 mm
2557.5000	DIN 51	2654.9025	58 mm	2761.0500	45 mm	9128.0500	DIN 54
2563.1000	DIN 54	2655.0500	DIN 54	2761.1011	45 mm	9366.1000	80 mm
2568.2500	DIN 45	2659.1000	DIN 45	2763.0250	25 mm	9375.0250	DIN 45
2581.2500	DIN 45	2659.5000	DIN 51	2766.1000	45 mm	9715.0100	DIN 32
2581.5000	50 mm	2659.6025	2" + 3/4"	2771.0100	22 mm	2425.91000	150 mm + 50 mm
2585.1000	ISO 45	2659.9025	DIN 61	2771.0500	45 mm	2212.6025 WBK	DIN 57
2588.1000	ISO 45	2661.1000	DIN 45	2772.0500	45 mm	CHS1103.2500	DIN 45
2605.1000	DIN 54	2661.2500	DIN 45	2774.0500	45 mm	CHS1108.2500	DIN 45
2607.0025	18 mm	2664.2500	DIN 45	2775.0500	45 mm	CHS1110.2500	DIN 45
2609.0500	DIN 54	2667.1000	DIN 54	2776.0500	45 mm	CHS1201.2500	DIN 45
2609.1000	DIN 54	2668.1000	DIN 54	2778.0500	45 mm	CHS1203.2500	DIN 45
2609.5000	DIN 80	2670.2500	45 mm	2779.1000	45 mm	DG10185.5000	Opening Nr. 61
2616.1000	DIN 54	2670.5000	45 mm	2781.0100	26 mm	DG10190.2500	DIN 45
2616.5000	DIN 80	2672.1011	DIN 45	2784.0500	45 mm	DG1250.9008	Opening Nr. 61
2617.1011	GL 45	2672.2511	DIN 45	2786.0500	45 mm	DG1250.9010	Opening Nr. 61
2618.0250	DIN 45	2672.5000	DIN 51	2788.0500	45 mm	DG1250.9095	Opening Nr. 61
2618.1000	DIN 54	2672.9025	DIN 61	2792.0500	45 mm	DG8015.9020	Opening Nr. 61
2620.1000	DIN 54	2676.2500	DIN 45	2793.0500	45 mm		
2622.5000	DIN 80	2678.1000	DIN 54	2794.0125	22 mm		
2626.1000	ISO 45	2679.5000	DIN 45	2794.0250	22 mm		
2626.2500	DIN 45	2680.9200	2" + 3/4"	2795.0500	45 mm		
2626.4000	ISO 45	2681.1000	DIN 54	2797.0250	22 mm		
2630.5000	DIN 51	2685.1000	ISO 45	2799.0250	22 mm		
2632.5000	50 mm	2685.2500	DIN 45	449.91100	150 mm + 50 mm		
2637.1000	ISO 45	2690.1000	DIN 45	8072.0100	32 mm		
2637.2500	DIN 45	2690.2500	DIN 45	8085.0500	54 mm		





Please check the best-before date on the product package before storage. The date refers to the shelf life of unopened packages when stored as indicated on the label.

## GENERAL INSTRUCTIONS

### STORAGE OF DEHYDRATED MEDIA

Be aware that dehydrated media are highly hygroscopic, light-sensitive and heat-sensitive. They must be stored at a temperature of 4–30 °C, larger temperature fluctuations and direct sunlight are to be avoided. Close an open package thoroughly to prevent moisture from getting in.

### PREPARATION OF THE MEDIA

Follow the instructions on the respective label or the technical data sheet. The safety data sheet contains information on possible hazards.

Place a quantity of medium powder, measured according to the manufacturing instructions (weight tolerance max. 1 %), in a clean, sterile and undamaged vessel with at least twice the final volume to allow thorough mixing.

Add a portion of the required amount of distilled water and stir to dissolve the medium. Then add the remaining water from the sides of the container to wash off possible powder remains. Agar-containing media must be brought to the boil carefully and stirred to dissolve the agar before sterilization.

The medium should preferably be sterilized on the day of manufacture.

Unless otherwise stated, the pH of the medium does not need to be adjusted and will be within the specified pH range after sterilization. Measure at 25 °C. Especially with older media batches, the pH should be checked after autoclaving. The pH can change considerably as a result of autoclaving.

### STERILIZATION

Please follow the instructions on the respective label or technical data sheet. Observe the general laboratory practice for using autoclaves. Avoid autoclaving the medium longer than necessary or at a higher temperature.

### SUPPLEMENTATION

Supplements should be stored according to the instructions and reconstituted if necessary. Follow the instructions on the packaging.

Before adding heat-sensitive supplements, the medium should be cooled down to 50 °C. The supplement should be warmed up to room temperature before addition. Mix quickly and thoroughly before distributing the medium into the final containers.





APPLICATION AREAS OF THE MEDIA

Art. no.	Product name	Water analysis	Food analysis	Pharma/ Cosmetics	Molecular Biology
9869	Baird Parker Agar (base)		X	X	
9850	Blood Agar (base)			X	
9264	Brain Heart Infusion Broth (BHI Broth)	X	X		
9835	Brilliant Green Bile Broth	X	X		
9717	Casein Peptone Lecithin Polysorbate Broth (base)		X	X	
9783	Cetrimide Agar Ph. Eur.	X	X	X	
9770	Columbia Agar Ph. Eur.		X	X	
9643	DEV Nutrient Agar	X	X		
9685	DG 18 Agar (Dichloran Glycerol Chloramphenicol Agar)		X		
9677	DRBC Agar (Dichloran Rose Bengal Chloramphenicol Agar)		X		
9571	Enterobacteriaceae Enrichment Broth Mossel (EE Broth)			X	
9439	Fraser Broth (base)		X		
8848	Lauryl Sulphate Broth		X		
8876	LB Agar acc. to Lennox				X
8843	LB-Agar acc. to Miller				X
8891	LB Broth acc. to Lennox				X
8822	LB Broth acc. to Miller				X
8811	Legionella BCYE Agar (base)	X	X		
8796	MacConkey Agar Ph. Eur.	X	X	X	
8753	MacConkey Broth Ph. Eur.		X	X	
8764	Malt Extract Broth				
8743	Mannitol Salt Agar (Chapman Agar)		X	X	
8761	MRS Agar ISO		X		
8733	MRS Broth		X		
8710	MYP Agar (Mannitol Egg Yolk Polymyxin Agar) (base)		X		
8657	Nutrient Agar APHA				
8546	Orange Serum Agar		X		
8519	Oxford Listeria Agar (base)		X		
8429	Palcam Listeria Agar (base)		X		
8449	Peptone Water, buffered ISO	X	X	X	
8425	Plate Count Agar (PCA)	X	X	X	
8459	Plate Count Skim Milk Agar (PCA)		X		
8992	Potato Dextrose Agar Ph. Eur.		X	X	
8267	R2A Agar Ph. Eur.	X	X	X	
8229	Rappaport Vassiliadis Broth		X		
9749	Reinforced Clostridial Medium (RCM) Ph. Eur.		X		
8135	Sabouraud 4 % Dextrose Agar Ph. Eur.		X	X	
8159	Sabouraud 2 % Dextrose Broth Ph. Eur.		X	X	
8174	Slanetz und Bartley Agar (base)	X			
8152	Standard 1 Nutrient Agar		X		
8180	Standard 1 Nutrient Broth		X		
8049	Terrific Broth				X
9661	Triple Sugar Iron Agar		X		
9738	Tryptic Soy Agar (TSA) Ph. Eur.	X	X	X	
9775	Tryptic Soy Agar with Polysorbate 80 and Lecithin Ph. Eur.				
9721	Tryptic Soy Broth (TSB) Ph. Eur.	X	X	X	
8032	TSC Agar (Tryptose Sulphite Cycloserine Agar)		X		
7883	VRB Agar (Violet Red Bile Lactose Agar)	X	X		
7836	VRBD Agar (Violet Red Bile Dextrose Agar) Ph. Eur.	X	X		
7772	Wort Agar		X		
7759	Wort Broth		X		
7649	XLD Agar (Xylose Lysine Deoxycholate Agar) ISO		X	X	
7533	YGC Agar (Yeast Extract Glucose Chloramphenicol Agar)		X		
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7548	2x YT Broth				X

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7.629 086	96	7.690 017	12	7.690 056	24	7.690 094	99	7.690 142	72	7.690 219	70
7.629 127	96	7.690 018	12	7.690 057	24	7.690 095	99	7.690 143	72	7.690 220	70
7.629 128	98	7.690 019	12	7.690 058	24	7.690 096	99	7.690 144	72	7.690 225	76
7.629 428	98	7.690 020	12	7.690 059	24	7.690 097	99	7.690 145	72	7.690 226	76
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7.636 877	96	7.690 024	12	7.690 063	24	7.690 101	71	7.690 153	72	7.690 233	76
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7.638 848	98	7.690 026	14	7.690 065	24	7.690 103	71	7.690 161	72	7.690 235	76
7.643 933	162	7.690 027	14	7.690 066	25	7.690 104	71	7.690 162	72	7.690 240	76
7.644 125	162	7.690 028	14	7.690 067	25	7.690 105	71	7.690 163	72	7.690 241	76
7.644 126	162	7.690 029	14	7.690 068	25	7.690 106	71	7.690 164	72	7.690 242	76
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7.671 876	98	7.690 035	14	7.690 074	25	7.690 112	73	7.690 175	72	7.690 252	33
7.672 432	162	7.690 036	14	7.690 075	25	7.690 113	73	7.690 180	77	7.690 253	33
7.672 433	162	7.690 037	14	7.690 076	25	7.690 114	73	7.690 181	77	7.690 254	33
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7.696 158	27	7.696 240	40	7.696 289	21	7.696 370	18	7.696 468	16	7.696 621	106
7.696 161	30	7.696 241	40	7.696 300	20	7.696 371	18	7.696 469	16	7.696 622	106
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7.696 163	30	7.696 243	40	7.696 310	19	7.696 373	18	7.696 471	16	7.696 624	106
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7.696 165	30	7.696 250	63	7.696 312	19	7.696 375	18	7.696 481	68	7.696 626	106
7.696 170	30	7.696 251	63	7.696 313	19	7.696 376	18	7.696 482	68	7.696 627	106
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7.696 650	103	7.696 717	78	7.696 787	159	7.696 854	41	7.696 997	55	7.697 816	88
7.696 651	103	7.696 718	78	7.696 789	160	7.696 855	41	7.696 998	55	7.697 817	88
7.696 652	103	7.696 719	78	7.696 790	160	7.696 856	41	7.696 999	55	7.697 818	88
7.696 653	103	7.696 720	78	7.696 791	160	7.696 857	41	7.697 000	55	7.697 820	87
7.696 654	103	7.696 721	78	7.696 792	160	7.696 858	41	7.697 001	55	7.697 821	87
7.696 655	103	7.696 722	78	7.696 793	160	7.696 859	41	7.697 002	55	7.697 822	87
7.696 657	103	7.696 723	78	7.696 794	160	7.696 860	41	7.697 003	55	7.697 823	87
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7.696 693	105	7.696 774	159	7.696 831	104	7.696 913	46	7.697 807	88	7.697 847	87
7.696 695	107	7.696 775	159	7.696 832	104	7.696 914	46	7.697 808	88	7.697 848	87
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110.9025	297	710.2500	288	827.2511	242	874.2500	286	1118.1000	60
112.1000	296	715.1000	291	829.2500	288	874.5000	286	1119.1000	60
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418.2500	294	775.1000	289	845.5000	214	1008.0050	232	1131.1012	61
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452.2500	220	790.2500	290	850.5000	214	1048.0250	232	1134.0252	60
455.1000	294	797.1000	289	850.9510	214	1056.1000	233	1134.1012	60
455.2500	294	797.2500	289	855.1000	285	1101.0500	60	1135.1000	59
456.1000	295	803.1011	266	855.5000	285	1103.1000	59	1136.1000	262
456.2500	295	804.1000	265	855.9510	285	1105.0025	244	1136.2500	262
464.5000	293	804.9025	265	857.1011	218	1107.0025	245	1136.2511	262
469.5000	294	808.1011	214	859.1000	286	1107.0100	245	1136.5000	262
469.9010	294	811.1000	267	859.2500	286	1109.1000	248	1136.9025	262
470.1000	294	811.2500	267	860.1000	215	1111.1000	60	1136.9050	262
470.2500	294	814.0001	301	861.0001	302	1112.1000	60	1136.9200	262
476.1011	219	815.1000	284	863.1011	287	1113.1000	60	1137.0252	60
476.2511	219	815.5000	284	865.1000	242	1114.1000	60	1137.1012	60
480.1000	293	818.1000	267	865.2500	242	1114.5000	60	1138.2500	264
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1139.0500	60	1182.2500	262	1307.0500	268	1340.1000	276	1381.2511	277
1140.0252	60	1182.5000	262	1307.1000	268	1340.5000	276	1382.0500	281
1140.1012	60	1182.9025	262	1307.5000	268	1340.9510	276	1382.2500	281
1143.1000	59	1184.1000	261	1308.0100	271	1341.0001	306	1383.1000	280
1145.2500	247	1184.9025	261	1309.0500	279	1342.1000	279	1384.1000	282
1146.0250	228	1185.1000	247	1309.1000	279	1344.1000	241	1384.5000	282
1147.1000	244	1185.2500	247	1309.9025	279	1346.1000	271	1385.0500	282
1147.2500	244	1186.2500	247	1310.1000	274	1347.0100	272	1385.1000	282
1150.1000	224	1186.9025	247	1310.2500	274	1347.1000	272	1385.9010	282
1150.5000	224	1188.1000	260	1310.5000	274	1348.1000	281	1386.0100	269
1150.9010	224	1188.2500	260	1311.1000	269	1348.5000	281	1387.0001	306
1150.9025	224	1194.1000	246	1312.1011	284	1350.1000	276	1388.0500	283
1151.0500	60	1194.2500	246	1313.0250	273	1352.1000	281	1388.1000	283
1152.2500	247	1194.5000	246	1313.1000	273	1353.1000	283	1389.0025	280
1155.9200	261	1194.9025	246	1315.1000	277	1354.1000	278	1389.0100	280
1156.1000	249	1195.9025	246	1316.0100	271	1354.9025	278	1390.2511	278
1156.2500	249	1197.1000	262	1319.1000	272	1355.1000	274	1390.5011	278
1157.1000	261	1197.5000	262	1320.1000	282	1355.5000	274	1390.9010	278
1157.5000	261	1197.9010	262	1320.5000	282	1356.1000	284	1390.9020	278
1157.9025	261	1197.9025	262	1321.1011	275	1356.5000	284	1390.9025	278
1159.0100	229	1198.2511	248	1322.1000	268	1356.9510	284	1390.91000	278
1162.1000	264	1198.9025	248	1322.5000	268	1357.1000	271	1391.9025	277
1162.2500	264	1199.1000	261	1325.0001	305	1357.5000	271	1393.1000	269
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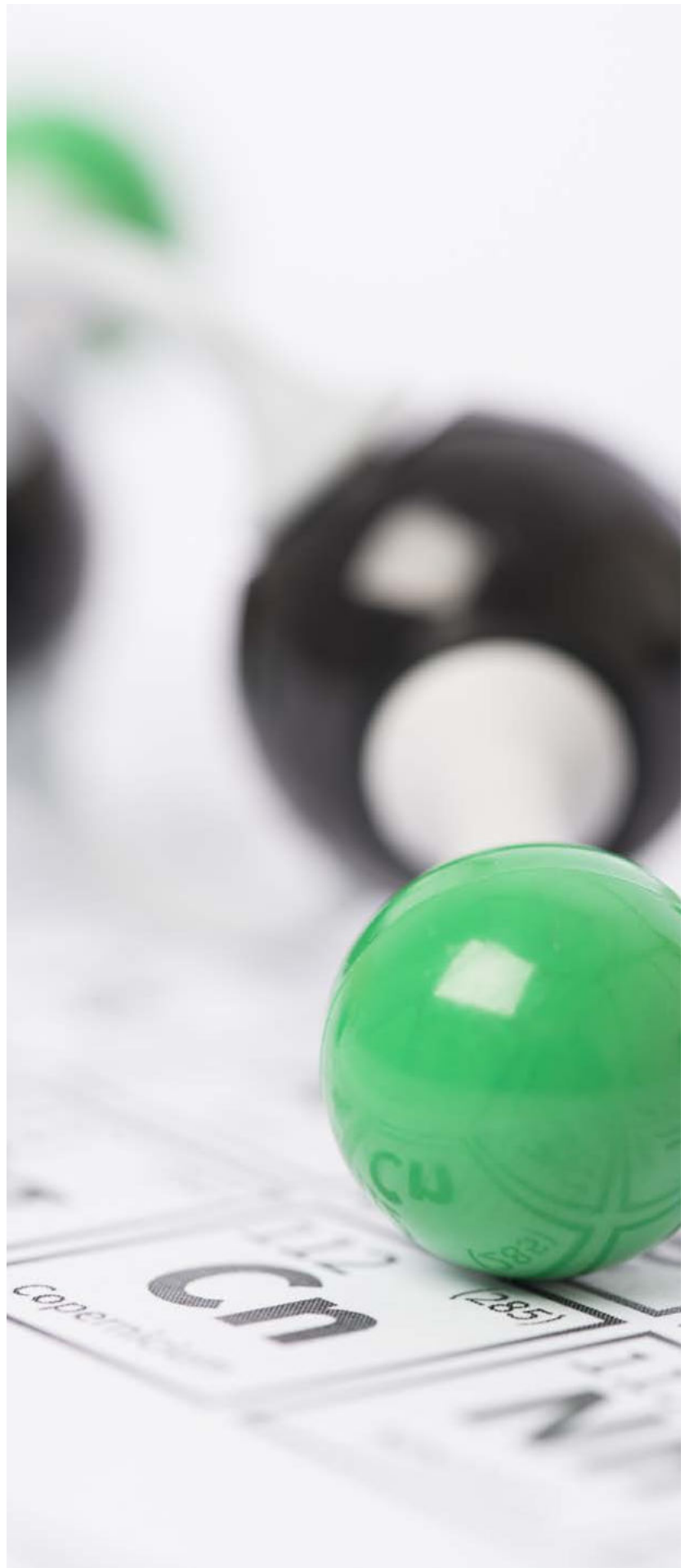
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## ABBREVIATIONS AND EXPLANATIONS

<b>ABS</b>	Acrylonitrile butadiene styrene
<b>ADR</b>	Classification according to ADR – European agreement on the international transport of hazardous goods by road
<b>CAS no.</b>	Chemical Abstract-Service index number
<b>CPE</b>	Chlorinated polyethylene
<b>EC Index no.</b>	EC index (67/548/EEC)
<b>EVA</b>	Ethylene-vinyl acetate
<b>HDPE</b>	High-density polyethylene
<b>LDPE</b>	Low-density polyethylene
<b>M</b>	Molecular weight
<b>NR</b>	Natural rubber
<b>PBT</b>	Polybutylene terephthalate
<b>PC</b>	Polycarbonate
<b>PCR</b>	Polymerase chain reaction
<b>PE</b>	Polyethylene
<b>PK</b>	Packaging unit
<b>PMMA</b>	Polymethyl methacrylate
<b>PP</b>	Polypropylene
<b>PS</b>	Polystyrene
<b>PTFE</b>	Polytetrafluoroethylene
<b>PU</b>	Polyurethane
<b>qPCR</b>	Real-time quantitative PCR
<b>TPE</b>	Thermoplastic elastomers
<b>UN</b>	UN number

## IMPRINT

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