

MODERNWATER

Microtox[®] CTM

Continuous Toxicity Monitoring

Modern Water's new* Microtox[®] CTM is a site-based, broad range, Continuous Toxicity Monitor (CTM). It continuously measures the chemical toxicity of a water source, giving instant indication of water health. Microtox[®] CTM is a fully automatic instrument that offers a 4-week, autonomous operating cycle and requires a low level of skill for both operation and maintenance.

Microtox[®] CTM makes fully automatic, continuous, on-line testing a reality. It has broad range detection capabilities that provide rapid early warning of contamination by several thousand known chemicals. This enables containment measures to be actioned in time to protect against serious contamination events. A major advantage over most analytical methods is that Microtox[®] CTM is able to detect contaminants whether or not there is prior knowledge of the potential source or nature of contamination.

Other on-line toxicity monitors take intermittent samples and provide only one test result in typically 15-30 minutes. This means that brief events may be missed and leads to a high incidence of false alarms. Microtox[®] CTM takes two measurements per second, significantly reducing the risk of false alarms.

- Real-time and truly continuous monitoring
- 4-week, autonomous operating cycle
- No manual intervention except for monthly maintenance
- Automatic diagnosis of system faults
- Remote control, data analysis and troubleshooting
- Detects thousands of chemical compounds with lower levels of detection than most other biosensor systems

*Patent-pending



MODERNWATER



Process explained

Biosensor tests using bioluminescent bacteria have been in use for 30 years and their capability in detecting toxic substances is well understood. They use the principle that certain strains of bacteria emit light when healthy. When they are exposed to toxic substances, the amount of light emitted reduces. The greater the toxicity of the sample, the lower the light emitted.

Measuring changes in light between healthy bacteria and bacteria exposed to toxic substances will therefore indicate the presence of a toxin in a water sample. Existing tests are off-line or intermittent and require high levels of skilled operator intervention, unlike Microtox® CTM.

SPECIFICATIONS

Sample Requirement	150 mL/h at ambient pressure
Sample Temperature	5 - 30 °C
Electrical	230V 50Hz AC 480W (or local equivalent)
Display	Colour 180mm diagonal, touch sensitive
Communications	Ethernet, USB port for data download
Communications Options	4-20 mA, 2 relay alarm outputs, GPRS modem
Consumables	Supplied freeze dried and vacuum packed for reconstitution on site. Suitable for 4 weeks operation
Auto Calibration Interval	User settable between 3 and 24 hours
Standard	5 mg/L zinc
Waste Volume	120 L/month – non-toxic, suitable for soak away
Autosampler	Takes samples on positive alarm (optional)
Weight	70kg (approx.)
Dimensions (main enclosure)	1675 x 750 x 365mm (H x W x D)
Housing	Aluminium
Maintenance	Typically 2 hours per month
Mounting	Wall or floor
Optional	Pre-filtration

Applications

Deliberate and accidental contamination events

Water intake protection

Potable water at point of use or in the distribution network

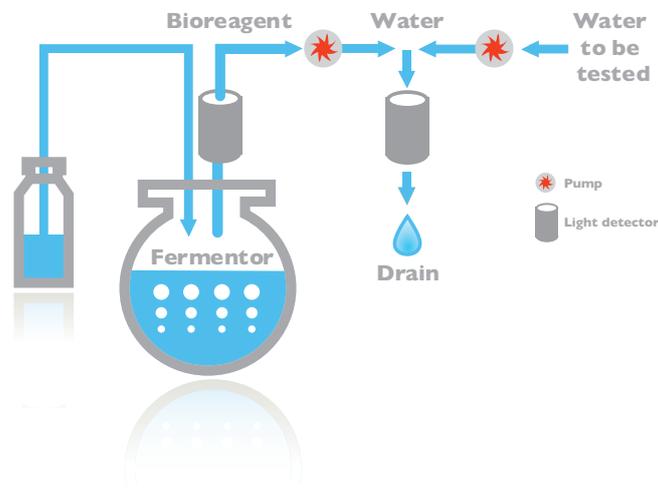
Monitoring of rivers, lakes, reservoirs, seawater, groundwater/natural attenuation

Effluent monitoring for discharge

Recycled water

What it detects

Microtox® CTM automatically and simultaneously detects a broad range of toxicants including: metals, pesticides, fungicides, herbicides, chlorinated solvents, industrial chemicals and algal toxins. This enables the detection of harmful contaminants in waters without the need for an extensive suite of time consuming and expensive tests.



MODERNWATER

tel: +44 (0)1483 696 000
www.modernwater.co.uk