

MEDICA[®] BIOX

Compliance, responsibility
and leadership

MEDICA® BIOX

Analyser liquid waste management in a single unit

Clinical analysers play a key role in human health and well being. However, the microorganisms, heavy metals, organic compounds and very high pH levels they produce can pose a significant risk to people and the environment. BIOX reduces those impacts.

- Environmental regulation, customer expectations and financial penalties are increasing world wide.
- MEDICA® BIOX assists in providing regulatory, environmental and brand protection for healthcare providers who rely on clinical analysers.
- BIOX eases risk management while also reducing lab teams' exposure to hazardous chemicals, reducing operational costs and also increasing analysers' availability.
- Dilution as a waste treatment method is increasingly prohibited. BIOX treats fluid analyser waste with advanced oxidation.



MEDICA® BIOX

Control, engagement, risk reduction, efficiency and performance



Liquid waste treatment

Controls the levels of Biohazards

Controls the levels of specific organic compounds

Adjusts pH levels in the liquid waste



Safer working

Protects colleagues health and safety and reduces spill risks and costs.

Reduces chemical storage requirements, compliance processes and costs

Reduces total chemicals sent to drain and so meets precautionary principle standards.



A more sustainable solution

Environmental responsibility:

The MEDICA® BIOX helps to reduce the environmental impact associated with using your clinical analyser. By treating biohazards in liquid waste before they go to drain.

Governance responsibility:

The MEDICA® BIOX assists in laboratories meeting local and governmental guidelines on biohazardous liquid waste disposal.



Stronger operational performance

Maximises laboratory work-flow and so increases profitability

Few interruptions enhance colleague satisfaction

Enhanced colleague satisfaction improves client and patient satisfaction

Liquid waste treatment

BIOX REDUCES ANALYSER FLUID WASTE RISKS

pH:

If the pH of water is too high or too low, the aquatic organisms living within it may die. pH can also affect the solubility and toxicity of chemicals and heavy metals in the water.

COD:

'Chemical Oxygen Demand' provides an index to assess the effect discharged wastewater will have on the receiving environment. Higher COD levels will reduce dissolved oxygen (DO) levels which is detrimental to higher aquatic life forms.

BOD5:

'Biochemical oxygen demand' is a measure of how much dissolved oxygen (DO) is being consumed as microbes break down organic matter. High biochemical oxygen demand can be caused by high levels of organic pollution, caused usually by poorly treated wastewater;

Reduced DO will have a detrimental impact on aquatic life.

Parameter	Method of analysis	Typical Value
E. coli by microplates	NF EN ISO 9308-3	<15 n/100ml
Enterococci by microplates	NF EN ISO 7899-1	<15 n/100ml
Pathogenic staphylococci	XP T 90-412	0 n/100ml
BOD	NF EN 1899-1	<200mg/l O ₂
COD	NF T 90-101	<1000mg/l O ₂
Total Nitrogen	NH ₃ + NO ₂ + NO ₃	<50mg/l N
pH	NF T 90-008	<9

* Based upon testing with a COBAS 8000 analyser

Risk reduction through a unique combination of proven techniques

Anodic oxidation:

Uses the principles of electrolysis to break down organic compounds, by splitting the carbon bonds at the anodic cell. Advanced oxidation process so no additional chemicals needed to cause oxidation.

UV Disinfection/oxidation:

UV oxidation of microorganisms, controls bacterial reproduction without the need for additional chemicals.

pH processing:

Reduces the pH of the water to permissible levels to go to drain. This is achieved using ion exchange resins and the anodic cell.

Safer Working

BIOX protects your people.

BIOX avoids the extensive risks associated with using chemical dosing to remove biohazards. By avoiding chemical dosing BIOX protects employees, companies and the environment. Traditional processes add chemicals to the chemical and biohazards in the effluent. Those chemicals can create even more complicated and hazardous chemicals. BIOX protects with a new oxidation process and lower risk approach.

Chemical free treatment means BIOX delivers three essential benefits.

Safer Working Environments

BIOX's closed treatment environment means that the staff working in your laboratory are protected from the treatment process and biohazard contained within the BIOX.

Higher Lab Efficiency

Lab space is always at a premium, taking up valuable room storing non-essential hazardous chemicals is wasteful. BIOX avoids time lost in the management of non-essential hazardous chemical storage to improve laboratory work flow.

Greater Employee Satisfaction

However many health and safety procedures are in place there is always the risk of human error leading to a near miss or a reportable accident. By taking away the need to handle hazardous chemicals the MEDICA® BIOX removes this risk.



A more sustainable solution

By demonstrating environmental care, BIOX will help build an organisational culture which attracts the most ambitious and capable team members.

In the healthcare sector, causing environmental damage can lead to a supplier being locked out of future bids. BIOX protects new business acquisition.

Organisations that manage risk well have lower insurance premiums, lower governance costs and often lower borrowing costs. BIOX demonstrates leadership in risk management.

MEDICA® BIOX provides brand insurance in 3 key ways:

Environmental Responsibility

MEDICA® BIOX means fewer chemical deliveries and fewer analyser liquid waste collections, to reduce your environmental footprint.

Governance Responsibility

MEDICA® BIOX supports you in meeting regulatory requirements, by reducing the risk of environmental exposure to hazardous chemicals.



Stronger Operational Performance

Operational Efficiency

BIOX reduces operational interruptions and so increases organisational efficiency. Fewer interruptions enhance colleague satisfaction. Enhanced colleague satisfaction improves client and patient satisfaction. BIOX enables professionals and organisations to focus on what they love creating: positive client outcomes.

Unbeatable running costs

Electrically driven processes reduce transport costs. Chemical hazard reductions reduce handling costs. Chemical use reductions reduce storage costs and waste processing costs.

A unique total solution

The combination of a MEDICA® water purification system with the BIOX further improves laboratory efficiency. A single service visit reduces laboratory work flow interruptions.



Dedicated to Discovery

info@elgalabwater.com / www.elgalabwater.com

ELGA Labwater are specialists in the engineering, service & support of water purification systems.

Unrivalled product design has achieved international recognition and awards.

Worldwide technical service teams support science & healthcare globally with specialist expertise.

Global digital performance monitoring from Hubgrade ensures laboratory work is uninterrupted.

A global supply chain supports clients from regional centres on every continent.

To find your nearest ELGA representative, go to www.elgalabwater.com and select your country for contact details.

Elga Global Operations Centre.

tel: +44 (0) 203 567 7300

fax: +44 (0) 203 567 7205



reddot design award
winner 2011



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