



Accurate, precise, real-time analysis of nitrate and nitrite for healthy and profitable aquaculture

In aquaculture, and particularly in closed-containment units, such as recirculated aquaculture systems and aquaponics, the control of nitrite and nitrate is crucial to safeguard species' health, maximise yield value and minimise environmental impact.

Our solution

With Aquamonitrix®, we offer you an accurate and practical means to monitor nitrate and nitrite with high specificity and accuracy. The analyser is easy to set up, requires minimal intervention over long deployments and can be moved to different sample matrices without requiring recalibration. This, together with low skills requirements and low reagent costs for operation, adds up to low lifetime costs.

Aquamonitrix® provides real-time nitrate and nitrite monitoring, enabling you to:

- Monitor intake and recirculating water for nitrite on a real-time, near-continuous basis and react immediately to protect species health
- Monitor biofilters to ensure complete conversion to nitrate
- Monitor effluent to demonstrate environmental compliance /react instantaneously to nitrate exceedances, avoiding ecological damage and fines
- Gain the kind of real-time, high-frequency precise and accurate data required to investigate, understand and optimise the nitrogen cycle in recirculating aquatic systems

Aquamonitrix® is a novel nitrate and nitrite monitoring solution

- Based on rapid ion chromatography and a novel, optical detection technology
- Offering laboratory accuracy in the field
- With simultaneous, yet selective, measurement of nitrate and nitrite over an analytical range suitable for aquaculture & aquaponic applications



Game-changing performance - making real-time, accurate nitrite & nitrate monitoring a reality



Aquamonitrix® key performance parameters

- The ion chromatography step allows for separate optical detection of nitrate and nitrite.
- Laboratory-quality accuracy (from ~ 99% in fresh water to >90% in challenging septic matrices).
- None of the accuracy loss or interference associated with UV detection in cloudy/turbid samples. No requirement for specialised pretreatment or high-cost, add-on sampling equipment.
- Low blockage and bio-fouling potential.
- Holds calibration over long deployments - even when moved to a different location or sample matrix.
- Straight-forward servicing and long intervals between services, with low intervention requirements. All that is needed is to simply top up the reagent and empty the waste sample as required, depending on the sampling frequency

- Capable of sampling every 10 to 15 minutes for near continuous monitoring
- Laboratory quality accuracy and precision
- Data fed directly to your central control system
- And/or to your secure Datamonitrix platform, for configurable alarms and alerts, and analyser self-diagnostics, all direct to your PC



Plug n' play for instant deployment

On arriving on site, your Aquamonitrix® unit can be installed and operating in a matter of hours.

- No need for site preparation
- The only connections required are power and sample inlet and outlet
- Choice of power & communication options
- The analyser is portable, lightweight and smaller than an airline carry-on case

Low life-time costs

- Simple set-up and operation
- Equally simple servicing, which can be carried out inhouse or by an agnostic service company
- Low skills requirement and low reagent costs

Want to know more?

Call us on +44 1524 884972 (UK)
 +353 59 9149097 (Ireland and Europe)
 Email us at info@aquamonitrix.com
 Visit www.aquamonitrix.com

View technical specifications over the page ->



TECHNICAL DATA SHEET

Specification

- + Analyser technology: Ion chromatography and optical detection
- + Minimum sampling interval: 15 mins
- + Accuracy: ~99% (fresh water) > 90% (septic wastewater)
- + Precision 95%
- + Analytical Range*
Nitrate: 0.6 - 500 mg/L as NO₃⁻ (0.14 to 113 mg/L as N)
Nitrite: 0.05 - 100 mg/L NO₂⁻ (0.01 to 23 mg/L as N)

* We can supply custom ranges within these broad limits by adjusting the sample loop to suit your analytical needs

Dimensions and Features

- + External size: 23cm X 36cm X 57cm (enclosure size, without supporting cradle)
- + Weight: 12 kg
- + Portable
- + Integrated provision for mounting/securing to a fixed surface (e.g. floor, wall, etc.)
- + Integrated carry handle and lockable hinged door
- + Rugged construction: Impact, UV and corrosion-resistant
- + Reagent: Potassium hydroxide (KOH)
- + Alarms and indicators: Tri-colour Status LED

Power Source

- + 15 - 25 V dc input power, 50W max. rated power
- + Integrated battery for backup
- + Solar/battery version also available

Environmental

- + Operating temperature range: 10 - 40°C
- + Sample temperature range: 2 - 50°C
- + Operating humidity range: 10 - 90% RH, non-condensing
- + Storage temperature range: -20 - 60°C
- + Storage humidity range: 10 - 90% RH, non-condensing
- + IP rating: IP65 (IEC 60529)

User Interfaces/Data Output

- + Wired output transmission: MODBUS over Serial (RS232 / RS485)
- + IoT communication capability
- + Optional IoT Datamonitrix data management platform
- + Data communications via RS232, for commissioning/troubleshooting

Certifications

- + C.E. Mark, REACH

Warranty

- + One Year

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