

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 nitrogenous compounds is crucial to safeguard species' health, maximise yield value and minimise environmental impact.

Our solution

To date, many producers have relied on ammonia measurements. But with Aquamonitrix®, we offer you an easy and affordable means to monitor nitrate and nitrite in real-time, with high precision and accuracy. Readings are instantaneously transmitted to your Datamonitrix platform, where you can store and analyse data, configure alarms and receive instant alerts to your PC.

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

- Monitor effluent to demonstrate environmental compliance / react instantaneously to nitrate exceedances, avoiding ecological damage and fines
- 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
- 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 for the aquaculture industry

- Based on rapid ion chromatography and a novel, proprietary optical detection technology
- Offering laboratory accuracy in the field AND real-time measurement
- Real-time data transmission, with instant alarms and alerts to your PC



The US EPA has found Aquamonitrix® to be over 90% accurate over a 30-day deployment period

Game-changing performance, making real-time, near continuous monitoring a reality

Up to now, high-frequency nitrate and nitrite monitoring has been stymied by the long wait times and high costs associated with conventional grab and lab sampling. Likewise, many existing real-time nitrate and nitrite monitoring solutions are unsatisfactory as they require constant recalibration, are costly to maintain and service or occupy massive footprints and are prohibitively expensive.

- In contrast, Aquamonitrix® is easy to set up and operate.
- It can be deployed for over 600 sampling runs before servicing - to discharge the waste sample and refill the reagent cartridge. That's equivalent to a deployment period of over 3 months, based on a monitoring regime of 6 samples per day.
- No recalibration is required until the end of the deployment period.
- Accuracy is not impacted by cloudy samples.

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
- The device is portable, lightweight and smaller than an airline carry-on case

Low life-time costs

- No sampling and lab analysis costs for nitrate/nitrite
- Low-cost reagent
- Easy set-up, operation and servicing – with low skilled labour requirements

Aquamonitrix® key performance parameters

- Minimum sampling interval: 15 minutes
- Accuracy: > 90%
- Precision: 95%
- Data fed directly into your Datamonitrix platform – where you can store, manage and analyse data and set up instant alerts direct to your PC



Want to know more?

Call us on +44 1524 884972 (UK)

TECHNICAL DATA SHEET

Specification

- + Sensory Type: Ion chromatography and optical detection
- + Minimum sampling interval: 15 mins
- + Accuracy: > 90%
- + Precision 95%
- + Analytical Range*
 - Nitrate up to 500 ppm as NO₃ (113 ppm as N)
 - Nitrite up to 100 ppm as NO₂ (31 ppm as N)
- + Limits of Detection*
 - Nitrate 1.5 ppm as NO₃ (0.34 ppm as N)
 - Nitrite 0.25 ppm as NO₂ (0.08 ppm as N)

**Lower/higher limits of detection and custom ranges can be provided*

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 Vdc input power, 50W max. rated power
- + Integrated battery for backup

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

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)

Certifications

- + C.E. Mark, REACH

Warranty

- + One Year

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