



The power to **accurately measure and understand** nitrate and nitrite pollution in the **aquatic environment**

Eutrophication, algae blooms, fish kills, hypoxic dead zones, amenity and economic loss and energy-intensive treatment to provide safe drinking water...

...The headline impacts and, indeed, causes of nitrogen pollution are well known.

But while monthly, weekly or even daily monitoring provides a static snapshot of a moment in time, could you be missing part of the picture?

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

- Capture nitrate and nitrite exceedances missed by intermittent spot sampling, supporting more effective regulation, investigation and enforcement
- Be alerted to pollution events in real-time
- Establish an evidence-based approach to nitrate trading and novel mitigation strategies
- Share real-time data locally to promote nitrate awareness and engage stakeholders
- Better understand the role of weather conditions in cyclical concentration spikes
- Investigate the fate and transport pathways of nitrate and nitrite and the impact of soil types, pH, microbiology and saturation levels on storage and remobilisation
- More accurately correlate nitrate and nitrite levels with ecological health

Aquamonitrix® is a new type of nitrate and nitrite monitoring sensor

- Based on rapid ion chromatography and a novel, proprietary optical detection technology
- Offering laboratory accuracy in the field AND real-time measurement
- With real-time data transmission to the Datamonitrix data storage and analysis platform



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

Game-changing performance, making high-frequency 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.

Existing real-time nitrate and nitrite monitoring analysers can also be unsatisfactory, as some sensor types require constant recalibration or lose accuracy in cloudy samples – while others 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 is 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.

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 and nitrite
- Low-cost reagent
- Easy set-up and low specialist skill requirements for operation and servicing

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)
 +353 59 9149097 (Ireland and Europe)
 Email us at info@aquamonitrix.com
 Visit www.aquamonitrix.com

View more technical specifications over the page ->



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

Power Source

- + 15 - 25 Vdc input power, 50W max. rated power
- + Integrated battery for backup

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)

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

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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