



COMPREHENSIVE SUPPORT

We offer comprehensive applications, technical service and software support before and after installation and training.

INCLUDING

- ▶ Development of custom chemistries
- ▶ Adaptation of existing methods to specific requirements such as matrix, range or detection limit adjustments
- ▶ Guaranteed availability of genuine consumables and spare parts
- ▶ A choice of preventative maintenance and service contracts to meet your specific requirements
- ▶ Continuous in-house development of software to incorporate new customer requested features

RELATED PRODUCTS

AA1 is the latest addition to the SEAL Analyzer range. It is sleek and simple — ideal for laboratories running 1 or 2 dedicated chemistries.

AA3 is a high performance, fully automated instrument, that uses the principle of segmented flow analysis to achieve high throughput, high reproducibility and low detection limits.

AACE software is a common platform for both the AA3 and QuAAtro series and is intuitive and flexible.

AQ1 and **AQ2** are flexible analyzers that uses the principle of discrete analysis where each test occurs in a separate or discrete reaction vessel.

Discrete analysis is complementary to segmented flow analysis and many laboratories use both techniques. The AQ1 and AQ2 are ideal when many and varied tests are needed on different samples.

SEAL's enhanced computer controlled **BD50** digestion block, is especially suited to Total Kjeldahl Nitrogen and Phosphorous methods.

Reproducible results are ensured as it is made from solid aluminum with a heating grid for even heating across the whole block. Please see our detailed brochure for further information.



www.seal-analytical.com

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QuAAtro 3.0Q USA 0212

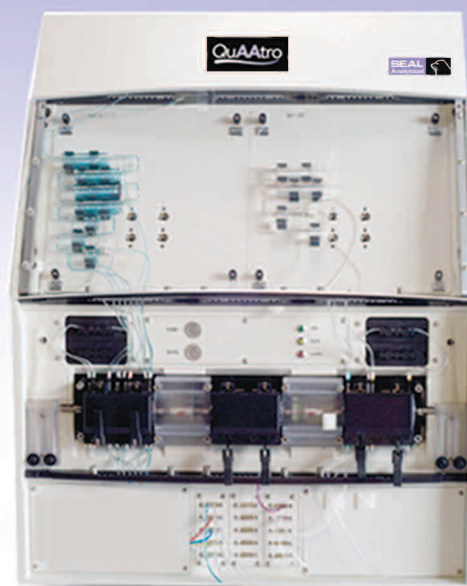


High Sample Throughput
Ultra-low Detection Limits
High Reproducibility
Compact and Flexible

QuAAtro

**HIGH PERFORMANCE
MICROFLOW ANALYZER**

QuAAtro uses microflow hydraulics, enabling high sample rates with low sample and reagent consumption.



QuAAtro is the World's Most Automated Segmented Flow Analyzer
Microflow Hydraulics • Heated Manifolds • High Resolution Detectors • Advanced Software

QuAAtro

QuAAtro is ideal for water and seawater analysis when high throughput and ultra-low detection limits are required.

USEPA, ASTM, ISO, AOAC, DIN, CORESTA and other international regulatory compliant methods are available.

APPLICATIONS INCLUDE

- Drinking Water
- Water and Wastewater
- Seawater
- Soil and plants
- Tobacco
- Wine

HOW DOES THE QUAAATRO WORK?

QuAAtro is the latest generation of the original world-class Technicon™ Segmented Flow Analysis (SFA) systems, which SEAL acquired in 2006.

A basic SFA system consists of an autosampler, a peristaltic pump, a chemistry manifold, a detector and data acquisition software. Sample and reagents are pumped continuously through the chemistry manifold. Air bubbles are introduced at regular intervals forming unique reaction segments which are mixed using glass coils. Glass is ideal, as it is inert, stays clean and enables easy visual checks.

In SFA, reactions run to completion and the ratio of sample to reagents in the detector reaches a constant maximum value. This results in ultra-low detection limits and exceptional reproducibility. Variations in reaction time, temperature and sample matrix do not affect the results as they do in other colorimetric techniques, such as flow injection analysis, where the reaction is not brought to completion.

QuAAtro is a microflow SFA system, the internal diameter of all glassware being 1mm. This reduces reagent consumption and increases throughput, with most methods running at 100 – 120 samples hour.

The integrated enclosed manifold and detector are heated to 37° C. Flow stability is ensured as the optimal bubble frequency for each method is programmed by silent air valves. Automatic start-up, method changeover and shutdown allows true unattended operation and overnight running.

QuAAtro checks its own performance, with automatic monitoring of noise, drift, bubble pattern and light energy, before and during a run.

- ▶ **As a market leader, SEAL has over 1,000 applications available and under continual development. Markets include water, wastewater, soil, plant, fertilizer, food and beverage. Please contact us for your specific application.**

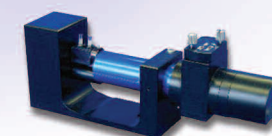
ADVANTAGES AND BENEFITS



A high resolution digital photometer, with optimized optics and 24-bit resolution, provides higher sensitivity at ultra-low concentrations, wider dynamic ranges and lower detection limits.



The enclosed, heated chemistry manifold means there is no need for heating baths. Microflow hydraulics allows faster analysis rates, lower reagent consumption. Inert glass components allow for easy visual checks and easy cleaning.



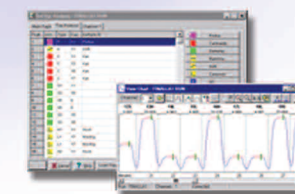
LED light sources are available for high performance applications, such as use on research vessels. Various flowcells are available, all with bubble-through technology.



QuAAtro Samplers are fast, robust and available with various rack sizes to meet your sample requirements. Samples can be added at any time during the run.



The heart of the system, the high precision three-speed peristaltic pump, ensures regular, reproducible dosing of liquid. Optional reagent valves allow automatic start up, method switching and shut down.



Instrument control and data acquisition is carried out through the intuitive, easy to use AACE software package. AACE is LIMS compatible and both standard and GLP versions are available.

OTHER FEATURES

- ▶ One click start up
- ▶ Reliable unattended operation
- ▶ Automatic performance checks before, during & after a run
- ▶ Can generate more than 1,000 results per day
- ▶ Multi-test manifolds for different nutrients with no hardware changes
- ▶ 5 channel seawater QuAAtro available
- ▶ Easily transportable



PLEASE VISIT

www.seal-analytical.com

or contact your local SEAL Analytical representative about your specific application.