



# QuAAtro39

**HIGH PERFORMANCE  
MICROFLOW ANALYZER**

$\text{NH}_3$        $\text{PO}_4$       TKN  
 $\text{NO}_3$        $\text{NO}_2$       TP      Si

QuAAtro39 uses microflow hydraulics, enabling high sample rates with low sample and reagent consumption.



# QuAAtro39

*QuAAtro39 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 QUAAATRO39 WORK?

The QuAAtro39 is the very latest generation of the original world-class Technicon Segmented Flow Analysis (SFA) systems. QuAAtro39 is now even more flexible with 33% more capacity, further improving your laboratory efficiency.

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.

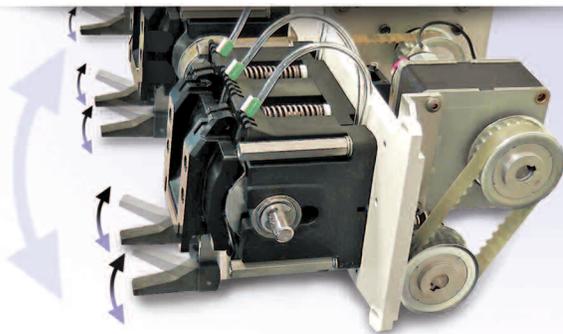
In SFA, reactions run to completion and the ratio of sample to reagents in the detector reaches a constant maximum value. This results in ultra-low detection limits and exceptional reproducibility. Variations in reaction time, temperature and sample matrix do not affect the results as they do in other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

QuAAtro39 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.

### ► Full Automation for the Ultimate in Walkaway Operation (Optional)

The QuAAtro39 incorporates unparalleled automation, with auto startup, auto method changeover, automatic monitoring and true automatic shutdown, making it ideal for overnight runs. During runs the QuAAtro39 will monitor its own performance, including the automatic monitoring of noise, drift, bubble pattern and light energy. Thanks to the intelligent software and automatic pump platen release the QuAAtro39 also performs an automatic shutdown that includes turning off the pump, releasing the platen off the pump tubes, and a valve/ reagent wash. With the QuAAtro39 you have an analyzer you can set and leave. The QuAAtro39 is the only analyzer in its class to employ automatic pump platen release giving you true complete and automatic shutdown.



# QuAAtro39 is the World's Most Automated Segmented Flow Analyzer

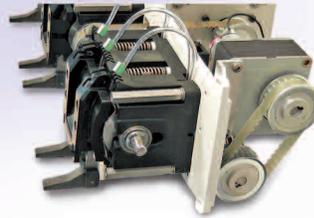
High Throughput • Ultralow Detection • Multi Test Chemistries • True Automatic Shutdown

## ADVANTAGES AND BENEFITS



### High Resolution Digital Photometer

With optimized optics and 24-bit resolution the QuAAtro39 provides higher sensitivity at ultra-low concentrations, wider dynamic ranges and lower detection limits.



### Set and Leave Operation

Auto startup, auto method changeover, and auto shutdown including valve/reagent wash with automatic pump platen release. (Optional)



### LED Light Source

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



### Intelligent Design for Faster Analysis & Ease of Use

With heated chemistry manifolds there is no requirement for internal heating units. Microflow hydraulics allows faster analysis rates, lower reagent consumption. Inert glass components allow for easy visual checks and easy cleaning.



### Regular, Reproducible Dosing

The heart of the system is the high precision three-speed peristaltic pump, ensuring regular, reproducible dosing of liquid.



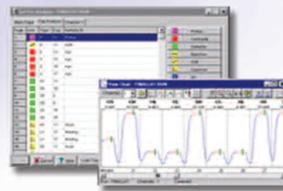
### Automatic Dilution for Off-Scale Samples

The SEAL Syringe diluter is used to accurately dilute standards and automatically dilute off-scale samples. It will prepare standards from a stock standard and dispense into user-specified location.



### Add Samples During the Run

QuAAtro39 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.



### Intuitive Software

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.

- ▶ Can analyze more than 500 tests per hour
- ▶ One click start up
- ▶ Automatic shutdown with platen release and self wash (Optional)
- ▶ Automatic performance checks before, during & after a run
- ▶ Multi-test manifolds for different nutrients with no hardware changes
- ▶ 5 channel seawater QuAAtro39 available
- ▶ Easily transportable



PLEASE VISIT  
[www.seal-analytical.com](http://www.seal-analytical.com)

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

## Colorimetric Nutrient Analyzers

### DISCRETE ANALYZERS



**AQ270**



**AQ300**



**AQ400**

### SEGMENTED FLOW ANALYZERS



**AA100**



**AA500**



**AA3**



**QuAAtro39**

## 50 Years' Experience in Environmental Analysis Built into Every Analyzer

50 years' experience in designing, developing and manufacturing automated wet chemistry analyzers specifically for very low detection levels in environmental applications has helped SEAL to apply the most useful, easy to use features into the SEAL range of Discrete and Segmented Flow analyzers. The SEAL analyzers are widely acknowledged as the best for environmental analysis, giving you everything you need to achieve equal or superior results to the manual and approved laboratory methods the SEAL analyzer replaces.

SEAL Analyzers are monitoring environmental samples in every corner of the globe. They are manufactured in the USA, Germany and the Netherlands. Engineering and chemistry support is provided from SEAL global facilities in USA, Germany, England, the Netherlands and China along with a worldwide network of specialist distributors.

### COMPREHENSIVE SUPPORT

We offer comprehensive applications, technical service and software support.

#### INCLUDING

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

## Robotic Handling Systems

SEAL Robotic Minilab systems for automating sample (pre) treatment in the laboratory – improving your sample handling efficiency. Typical applications include BOD, pH, COD, Alkalinity, and conductivity measurements with options such as decapping/capping, sample splitting, and filtration. Call us about your laboratory needs and we will design a robot to suit you.

## Digestion Systems

FOR METALS AND TKN,  
TP DIGESTION



**BD50**



**SmartBlock II**



**DEENA 3**



**SEAL Minilab 1200**

**SEAL**  
Analytical



[www.seal-analytical.com](http://www.seal-analytical.com)

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