



QuAAtro39

**HIGH PERFORMANCE
MICROFLOW ANALYZER**

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 QUAAURO39 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. Automatic start-up, method changeover and auto shutdown – with pump platen release – allows true unattended operation and overnight running.

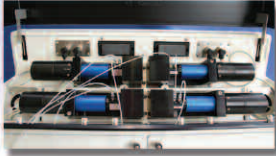
QuAAtro39 checks its own performance, with automatic monitoring of noise, drift, bubble pattern and light energy, before and during a run.

▶ **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.**

QuAAtro39 is the World's Most Automated Segmented Flow Analyzer

High throughput • Ultralow detection • Multi test chemistries • True automatic shutdown

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 chemistry manifolds are heated so there is no need for internal heating units. 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.



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.



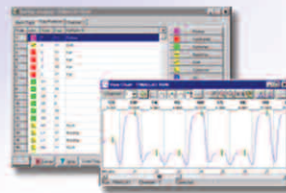
The heart of the system, the high precision three-speed peristaltic pump, ensures regular, reproducible dosing of liquid.



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.



Unparalleled automation with the new automatic pump platen release feature and reagent/wash valves. This allows auto startup, auto method changeover and true auto shutdown with platen release.



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
- ▶ Reliable unattended operation
- ▶ 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

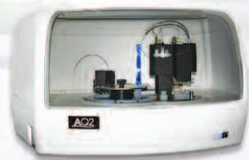
or contact your local SEAL Analytical representative about your specific application.

Colorimetric Nutrient Analyzers

DISCRETE ANALYZERS



AQ1



AQ2



AQ400

SEGMENTED FLOW ANALYZERS



AA1



AA3



QUATRO 39

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.

FOR YOUR SAMPLE PREPARATION — BLOCK DIGESTION : TKN, METALS

SEAL's enhanced computer controlled **BD50** digestion block is ideal for speeding up the acid digestion process for soils, water samples and food products. It is especially suited to Total Kjeldahl Nitrogen and Phosphorous methods. The solid aluminium heating grid delivers even heating across the whole block and ensures reproducible results. *Please see our detailed brochure for further information.*



THOMAS CAIN (a SEAL Analytical brand) manufactures automated sample preparation and digestion systems for the analysis of trace metals for environmental laboratories. From the **SmartBlock** – a simple manual digestion block – to the **DEENA** acid digestion system, that fully automates the sample preparation and digestion for EPA and other laboratory methods.



www.seal-analytical.com



SEAL Analytical is a global company with offices worldwide - contact us at:

SEAL Analytical, Inc.

Mequon Technology Center
10520-C Baehr Rd.
Mequon, WI 53092
United States

Tel: +1 (262) 241 7900
Fax: +1 (262) 241 7970
sales@seal-us.com

SEAL Analytical Ltd.

Unit 3 Tailsman Business Centre
Duncan Road
Park Gate
Southampton, SO31 7GA
United Kingdom

Tel: +44 (0) 1489 864 400
Fax: +44 (0) 1489 880 531
sales@seal-us.com

SEAL Analytical GmbH

Werkstrasse 5
D-22844 Norderstedt
Germany

Tel: +49 (0)40 60 9292 9-00
Fax: +49 (0)40 60 9292 9-02
info.germany@seal-analytical.com

SEAL Analytical Shanghai

Room 413, 12th Building,
No. 128 Xiangyin Road,
Shanghai, 200433
China

Tel: +86 21 3362 5002
Fax: +86 21 3362 5002

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AxFlow

SEAL Analyzers are monitoring environmental samples in every corner of the globe. They are manufactured in the United States and Germany. Engineering and chemistry support is provided from SEAL global facilities in USA, Germany, England 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