

*Highly Automated  
Simple to Use  
Efficient  
Compact Design*

# AQ2

ADVANCED DISCRETE ANALYZER



AQ2 is a flexible analyzer that uses the principle of discrete analysis where each test occurs in a separate or discrete reaction vessel.

# AQ2

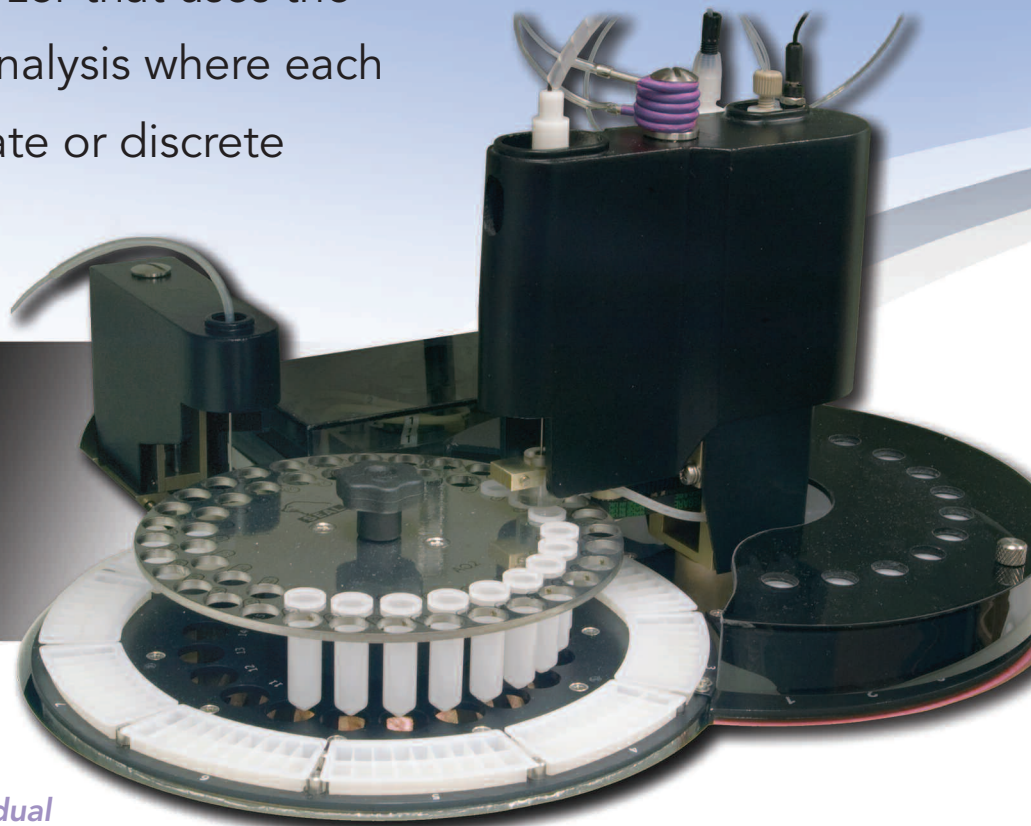
*AQ2 is ideal...when many and varied tests are needed on different samples and/or individual results are needed immediately.*

**USEPA, ASTM, ISO**  
and other international regulatory compliant methods are available.

## METHODS INCLUDE

**Alkalinity**  
**Ammonia**  
**Chloride**  
**Cyanides**  
**Nitrate/Nitrite**  
**Nitrite**  
**Phenolics**  
**Phosphate, ortho**  
**Phosphorus, total**  
**Silicate**  
**Sulfate**  
**Total Kjeldahl Nitrogen**

**PLUS MANY MORE**



## HOW DOES THE AQ2 WORK?

The AQ2 employs a robust robotic sampling arm working in conjunction with a stepper motor-driven syringe that is responsible for aspirating, dispensing and mixing accurate and precise quantities of sample and reagent in miniaturized test tubes called reaction wells.

The sample and reagents are incubated in the reaction wells for a preprogrammed time. A single aliquot is then transferred into a 10mm 100% optical glass cuvette. The absorbance is read on the stationary reactant to ensure the best possible signal to noise ratio.

The sample is always read in the same position in front of the detector, in the same glass cuvette. This eliminates the issues of scratching and reaction well variability found with direct read systems. As the liquid is moved, not the tray, fewer moving parts means higher reliability.

The standard methods supplied have optimized reaction times which ensure the reaction is brought to completion. This complete reaction emulates the manual and segmented flow methods and ensures lowest detection limits and good reproducibility.

Once the absorbance is read, the glass cuvette is thoroughly cleaned and checked, ensuring no carryover or cross contamination.

► **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.

The AQ2 Advanced Discrete Analyzer is a fully automated instrument designed specifically for the environmental and industrial markets.

## ADVANTAGES AND BENEFITS



- ~ 100% optical glass no flow cuvette used for precise absorbance measurement
- ~ Robust detection system utilizes stationary measurement cell
- ~ 10 mm optimum path length



- ~ Highly flexible software designed with user input
- ~ QCPro™ Data Quality Assurance System – allows the user to specify QC types, limits and corrective actions upon a QC failure



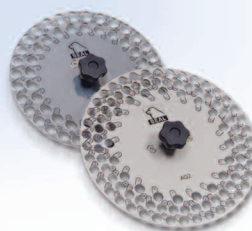
- ~ Reagent wedges with on-board cooling – only 20-400 µL reagent used per test
- ~ Automatic reagent level sensing verifies sufficient reagent volumes
- ~ Reagent expiration date tracked through software



- ~ Optional integrated automated cadmium coil reduction for nitrate/nitrite determination
- ~ Cadmium coil is fully sealed and valve controlled
- ~ In situ coil regeneration is fully automated through software



- ~ Low cost, disposable wells used for each discrete reaction
- ~ Constant heating and programmable reaction time ensure reaction reaches completion



- ~ Both 57 and 100 position sample trays are available to accommodate sample load
- ~ Sample trays are easily interchangeable

### OTHER FEATURES

- ▶ *Walk away operation - including ability to run overnight*
- ▶ *Segregated chemical waste and wash minimizes environmental impact*
- ▶ *Only 500 – 600 µL of combined reagents and sample consumed per test*
- ▶ *Add samples after a run has started*
- ▶ *Automated standard preparation and dilution of over range samples*
- ▶ *Will run up to 150 tests per hour*
- ▶ *Tests programmable per sample to reduce analysis time*



PLEASE VISIT

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

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

# AQ1



# AutoAnalyzer 3



# QuAAtro



## COMPREHENSIVE SUPPORT

We offer comprehensive applications, technical service and software support prior to and following installation and training. *These include...*

- ▶ 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 selection of preventative maintenance and service contracts to meet your specific requirements
- ▶ Continuous in-house development of software to incorporate new requested features

## RELATED PRODUCTS

The **AQ1** is SEAL's smaller, lower cost automated discrete analyzer. It has a smaller footprint and is ideal for laboratories with smaller workloads. The **AQ1** also uses the principle of discrete analysis where each test occurs in a separate reaction vessel.

The **AutoAnalyzer 3 HR** and **QuAAtro** are the latest generation segmented flow analyzers (SFA). Based on the robust, world class heritage of the original Technicon™ design, these instruments offer exceptional reliability, performance and ease of use for over 1,000 available methods.

**AACE** software is a common platform for both SFA instruments and is intuitive and flexible. Both instruments are especially suitable for ultra low level determinations such as drinking water and in complex matrices such as seawater with varying salinity. Segmented flow analyzers are complementary to discrete analyzers and are particularly attractive to labs that routinely run many samples for the same analytes.

*Discrete analysis is complementary to segmented flow analysis and many laboratories use both techniques.*



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

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