

QuikChem® 8500 Series 2 Flow Injection Analysis System



PROVEN METHOD PERFORMANCE WITH HIGH PRODUCTIVITY

The Lachat QuikChem 8500 Series 2 Flow Injection Analysis System features high sample throughput and simple, but rapid, method changeover. The QuikChem 8500 Series 2 system maximizes productivity in determining ionic species in a variety of sample types—from sub-ppb to percent concentrations. More than 400 methods are available for environmental, agronomic and industrial applications—including EPA-accepted and equivalent methods. (Equivalent methods have comparison tables available upon request).

FEATURES OF THE SERIES 2

- Run up to 5 channels for high productivity analysis or dedicated operation.
- New 2-cm flow cell methods allow more signal for detection at lower levels.
- Run Omnion software on Windows 7 and Windows 8 32/64-bit operating systems.
- Interface Omnion software in multiple languages—including Spanish, German, French, Portuguese, and Italian.

FIA TECHNOLOGY FOR MAXIMUM PRODUCTIVITY

The QuikChem 8500 Series 2 system uses reliable, accurate Flow Injection Analysis (FIA) technology. FIA technology was developed when scientists processing large numbers of samples experienced productivity delays while using Segmented Flow Analysis (SFA).

Advantages of Flow Injection Analysis include:

- Bubble elimination from the analytical stream.
- Reduced inner diameter of the reactor tubing.
- Precise injection of samples into the analytical stream.

TIME SAVINGS WITH IMPROVED ACCURACY AND QUALITY CONTROL

FIA technology produces analytical peaks with very rapid rise and recovery times and provides complete inter-sample washout to prevent carry-over between samples.

OTHER FIA PRODUCTIVITY CHARACTERISTICS INCLUDE:

- Fast startup and shutdown times—approximately five minutes—for rapid method changeover.
- Rapid analysis times—typically 20 to 60 seconds—allow samples to be analyzed in near real-time while data quality can be monitored and controlled during the analysis.
- High sample throughput—typically 60 to 120 samples/hour.
- Broad working range—sub-ppb to percent concentrations.
- Wide dynamic range—typically two to three decades.

OVER 400 METHOD VARIATIONS AVAILABLE

The QuikChem 8500 Series 2 system uses reliable, accurate Flow Injection Analysis (FIA) technology.

Flow Injection Analysis methodologies include:

- Methods that comply with EPA, ISO, and DIN standards.
- Simple to run in-line preparation methods.
- Go to www.lachatinstruments.com or www.hach.com to download the most current methods list of EPA-approved, accepted, and equivalent methods.

SAMPLE MATRICES

waters/wastewaters	chlor-alkali (caustic/brine)
seawater/brackish water	feeds & forages
soil extracts	aqueous formulations
plant/soil digests	plating baths/mineral processing
fertilizer digests	extracts of air sampling filters
food stuffs	tobacco extracts
beverages	high purity water

OMNION SOFTWARE

Easy-to-use, tremendously powerful and versatile, Omnion software controls the operation of the QuikChem 8500 Series 2 system. This software system is compatible with 64-bit Windows 7 and Windows 8. Multiple language options are also available in the latest version. Omnion is the first software package to offer a completely unified computing environment for both flow injection analysis and ion chromatography

Parameters

Acidity	Cations (Ion Chromatography)	Glucose (reducing sugars)	Manganese	Rapid IC (Anions)
Alkalinity	Chlorate	Hardness, Total	Monochloramine	Reducing Sugars, Total
Aluminum	Carbon	Hydrazine	Molybdenum	Silicate
Amino Acids	Carbonate (total)	Hydrogen Peroxide	Nitrate-Nitrite	Sulfate
Ammonia	Chromium, Hexavalent	Hydroxide	Nitrite	Sulfide
Amylose	Color	Hypochlorite	Total Nitrogen	Sulfite
Anions (Ion Chromatography)	Conductivity	Iodide	Organic Acids	Surfactants
Boron	Copper	Iron	Orthophosphate	Thiocyanate
Bromide	Cyanide	Kjeldahl Nitrogen	Oxyhalides (Ion Chromatography)	Total Amino Acids
Total Phosphorous	Fluoride	Kjeldahl Phosphorous	pH	Uranium
Calcium	Formaldehyde	Lactose	Phenol	Urea
			Phosphorous	Zinc

Please see the comprehensive methods lists on hach.com for more information of parameters or sample matrices that Lachat Applications can serve.

QuikChem 8500 Series 2 Flow Injection Analysis System Options

ION CHROMATOGRAPHY OPTION

The QC8500 Series 2 system can use an ion chromatography (IC) option to complement the FIA technology. When integrated with FIA or used as a standalone instrument, the IC option adds the power to profile samples for a class of ionic species. While FIA is ideally suited for processing relatively large numbers of samples for a single analyte per injection, ion chromatography enables the determination of multiple ions from a single injection.



- Operation of FIA and IC simultaneously and independently...on the same instrument platform.
- Shared use of several peripherals including sampler, dilutor, sampling pump, and data station.
- Uniform operating protocols.
- Training and support provided

ASX SERIES AUTOSAMPLERS

ASX-560 Autosampler

Accommodate large sample loads with up to 360 sample and 16 bulk standard positions for both calibration and QC standards. The integral wash bath ensures complete washout of the sampling line to prevent inter-sample carryover and cross-contamination.



ASX-280 Autosampler

Accommodates up to 180 samples and 10 standards in a compact, space-saving footprint.



MICRO DIST® — THE ORIGINAL!

A REVOLUTION IN DISTILLATION TECHNOLOGY

With the MICRO DIST® system from Lachat, distill up to 21 samples for cyanides, sulfide, and ammonia in 30 minutes; and phenolics and tritium in 90 minutes. The MICRODIST system eliminates



bulky, expensive, clumsy, and time-consuming glassware-based distillation units while accommodating liquid and solid samples to save time and money while reducing complexity.

PRECISION DILUTOR SYSTEM

The PDS200 Dilutor System automates the preparation of working standards from a stock standard, estimates the concentration of



off-scale samples, performs the required dilution, and re-runs the sample—automatically and without operator intervention.

BD-40 BLOCK DIGESTOR

Lachat’s BD40 Block Digestor will improve accuracy, precision and productivity of your high temperature digestions.



Designed for harsh environments! The BD40HT block digestor utilizes the latest in graphite block technology, with silicon carbide (SiC) coated graphite blocks which resist aggressive corrosion. With a two-tier, dual zone tube rack, the BD40 space used is reduced by 50%, allowing more room for other lab instruments.

Specifications*

Analysis Methods

FIA (Flow Injection Analysis); Integrated IC (Ion Chromatography)

Accuracy and Reproducibility

0.50%

Channels

5 maximum

Light Source

Tungsten halogen lamp

Detector

Dual beam photometer (360-880 nm)

Filter Type

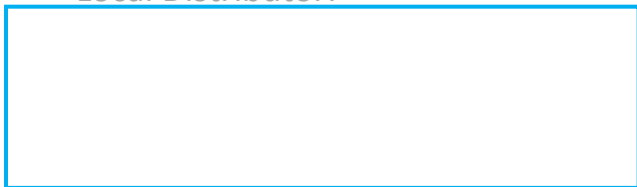
Interference filter

Heating Unit

25 to 160°C (77 to 320°F)

**Subject to change without notice.*

Local Distributor:



For Technical Assistance, Price Information and Ordering In the U.S.A.

Call toll-free (800) 247-7613.

Outside the U.S.A.

Contact the LACHAT office or distributor serving you.

Valve

High-performance 6 port injection sample valve

Reagent Pump

12 and 16 positions controlled by software

Dilutor

Dilutions from 1.6-4000-fold

Mixing Coils

PFTE tubing

Flow Cell

1mm, 10 mm or 20 mm path length

Peak Measurement

Area/Height

Tube I.D

0.8mm/0.5mm

Injected Sample Volume

10µL-1500µL

Sample Throughput

60 – 120 tests /hour/channel (up to 5 on one instrument)

Data Quality Control

Real time closed-loop control of data quality

Hardware

PC required for operation

Recommended Operating System

64 bit Windows 7 or 8

Software

Omnion 4.0

Data Quality Management enabled

LIMS import/export capabilities

Multi-language supported

Dimensions (Width x depth x height)

5 channel unit= 70.1 x 61.0 x 25.1 cm (27.60 x 24.03 x 9.90 in)

2 channel unit= 70.1 x 40.6 x 25.1 cm (27.60 x 16.01 x 9.90 in)

On the Worldwide Web

www.lachatinstruments.com or www.hach.com

E-mail for Support

techhelp@hach.com

E-mail for Sales

sales@lachatinstruments.com

