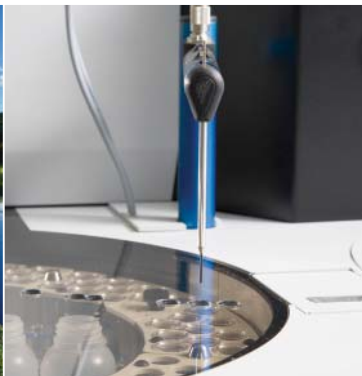




The BluVision™ Discrete analyzer



Skalar 

your partner in chemistry automation

Introduction



Skalar launches its new automation technology, the BluVision™ discrete analyzer, for the analysis of colorimetric parameters.

With the BluVision™ discrete analyzer we complement our range of products for the automation of colorimetric analysis, which already consists of the San++ segmented flow analyzer and the SP2000 test kit robotic analyzer.

The Discrete analyzer is ideal for environmental and industrial laboratories analyzing a wide variety of sample types and matrices. This system integrates years of experience in the field of spectrophotometric analysis and robot automation in one design. Advantages are the low ppb level detection limits, high accuracy and the large sample capacity.

Typical application areas for the BluVision™ are for example drinking water, wastewater, ground water and surface water.

Parameters:

- Alkalinity
- Free Aluminum
- Ammonia
- Calcium
- Chloride
- Chromium VI
- Color
- Free Cyanide
- Total Hardness
- Free Iron
- Magnesium
- Nitrate+Nitrite
- Nitrite
- Free Phenols
- Ortho Phosphate
- Silicate
- Sulfate

All our applications conform to regulatory bodies such as NEN-ISO 15923-1, CMA/2/I/C.8, EPA, Standard Methods for Water and Wastewater (SMWW), ASTM etc.

The BluVision™ Discrete analyzer

The BluVision™ automates the sample & reagent pipetting into the cuvettes, mixing, heating, blank correction and photometric measurement.

The BluVision™ discrete analyzer has 100 sample positions and 32 positions for reagents, (stock) standards and QC's. The sample and reagent racks are cooled during the analysis run.

One needle is used for dispensing sample and reagent into the cuvettes. The needle pre-heats the samples and reagents prior to dispensing.

The cuvette tray of 160 test positions is temperature controlled. The cuvette blocks are automatically loaded into the cuvette tray via an autoloader system. The autoloader holds an additional 48 cuvette blocks, giving a total of 640 tests running without operator intervention.

The detector is equipped with a halogen light-source and a filter wheel containing 8 filters with different wavelengths. The BluVision™ is capable of running up to 8 different parameters simultaneously. The filters can be easily exchanged for different chemistry wavelengths.

The cuvette has an optical path-length of 15 mm which allows accurate low ppb level detection. The cuvette blocks are disposable, which eliminates any carry-over between tests. Used cuvette blocks are automatically stored in a waste bin for safe removal after analysis. The BluVision™ has a separate waste container for toxic reagents which is automatically selectable per method.

In addition the analyzer can create calibrations from stock solutions; auto dilutions of over-ranged samples or perform re-analysis of samples.



Autoloader for cuvette blocks



Pipetting / Dispense needle



Filter wheel housing

Procedure

Typical fully automated discrete analysis sequence consists of the following steps:

The samples and reagents are loaded on the analyzer. The sample table is set up and the analyzer is started.

Depending on the application to be performed certain steps will be automatically executed. Below you can find an example of the automated procedure:

1. The cuvette-block is pushed from the autoloader into the cuvette wheel.
2. The needle picks up the first sample
3. Sample is dispensed in the cuvette
4. The needle is rinsed and whilst simultaneously the cuvette wheel rotates to the measuring unit for a blank measurement of the sample.
5. The reagent is picked-up and the cuvette wheel rotates back
6. Reagent is dispensed in the cuvette
7. Again, the needle is rinsed and the cuvette wheel rotates to the measuring position for final measurement

FEATURES

- Complete "walk-away" automation: sample & reagent pipetting into the cuvettes, mixing, heating, blank correction and photometric measurement
- Accurate low ppb level detection.
- Disposable cuvette blocks, eliminating any carry-over between samples
- User-friendly, no contact with toxic or corrosive reagents
- Autoloader for an additional 48 cuvette blocks
- Possibility to load priority samples during the run
- Removable sample & reagent racks
- Automatic creation of calibrations from stock solutions
- Sample pre- and post dilution functions
- DiscreteAccess software package, incl. analyses scheduler, excellent quality control features, user definable print report and export options to i.e. LIMS/Excel etc.
- Segregation of chemical waste, depending on disposal requirements



Sample and Reagent racks



Needle and rinsing vessel



Cuvette tray and Autoloader



Two waste containers

Software



DiscreteAccess™ is user-friendly and multi-tasking software package for data acquisition and to control the BluVision™ discrete analyzer.

The BluVision™ integrates a touch screen display, which provides all relevant instrument information, for example analyzer status, real-time monitoring reagents and remaining test capacity, temperatures of the cuvette and sample trays. In addition, a range of tasks can be executed from this display, for example loading cuvette blocks, changing filters etc.

For running the analysis, data collection and calculation the analyzer uses a comprehensive software package, DiscreteAccess™, which complies with all current laboratory requirements. An easy-to-use user interface allows the operator to start up the analyzer within seconds. Each analysis run can be set-up batch-wise or random access. For each sample, the user enters the sample ID's or uploads them from LIMS, then selects the desired analytical parameters to be analyzed and starts the analyzer.

The analyzer automatically pre-dilutes samples or if a sample goes over-range during analysis, the sample is automatically re-run in a different analytical range or re-run after automatic post-dilution.

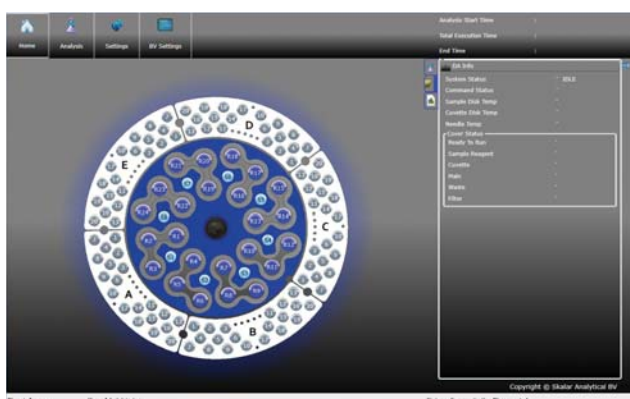
Extensive QC protocols are available such as CLP and 21 CFR part 11, which includes password protection, data integrity, data safety and audit trails. Final results can be printed using a user-definable report format or exported to LIMS for further data handling.

SOFTWARE FEATURES

- Definable levels to prevent unauthorized access
- Scheduler for a delayed start time
- Pre-defined application files for Nitrite, Nitrate, Alkalinity and many more
- Customized applications files can be integrated.
- Easy addition/deletion of samples during a run
- Possibility of exporting results during analysis
- Results export to txt, excel file or LIMS
- User defined print reports
- Creating Quality Control Charts from quality control samples



Touch screen



Main screen



Results screen

BluVision™

Discrete Analyzer



Specifications

Hardware

- Sample positions / volume	100 tubes / up to 10 ml (5 racks with 20 positions)
- Reagent positions / volume	24 containers 50 ml + 8 containers 10 ml
- Cuvette positions	640 (160 in cuvette tray and 480 in autoloader)
- Cuvette light path	15 mm
- Cuvette heating	37 or 40 °C
- Pipetting station and volume	500 µl (plus 5 ml syringe for dilutions in sample cups)
- Detector	Dual beam
- Detector resolution	0.0001 AU
- Wavelength	Pre-installed between 340 -900 nm
- Wavelength selection	Minimum 8 applications simultaneous in 1 run (8 different wavelengths)
- Throughput	150 tests / hour
- Waste	Separate collection of hazardous waste (f.e. Mercury)

DiscreteAccess™ Software

- Operating System	Windows® 7, 8.1, 10
- Calibration order	1st and 2nd (ISO 8466)
- Out of range samples	Automatic pre and post dilutions, automatic method change over to lower or higher range.
- Standards	Automatic preparation of working standards directly into a cuvette or sample cup
- Blank correction	Automatic blank correction if required
- Sampling sequence	Automatic optimization
- Data export	Excel, ASCII or to LIMS
- Output protocols	User definable
- Password protection	Yes
- CLP	Yes
- 21 CFR Part 11	Yes, optional
- Analyzer Pause function	Yes
- Analysis alarm functions	Yes
- Data import	LIMS, barcode, Excel, ASCII

General

- Power Supply	230/115 volt 50/60 Hz
- Dimensions (LxDxH)	120 x 70 x 65 cm
- Weight	140 kg

Other Available Automated Colorimetric Analyzers

SP2000 test kit analyzer

For complete automation of colorimetric applications using test kits, especially for laboratory which process different parameters on small numbers of samples. Typical application areas are water and wastewater.

Parameters:

- COD
- Total Phosphate
- Total Nitrogen
- Ammonium
- Nitrite
- Etc.



San++ continuous flow analyzer

The continuous flow analyzer offers complete automation for a wide range colorimetric parameters including automatic in-line sample pretreatment e.g. dialysis, distillation, extraction and /or digestion. Typical application areas are Water, Beer / Malt, Wine, Tobacco, Soil / Plant / Fertilizer etc.

Parameters:

- Ammonia
- Chloride
- Fluoride
- MBAS
- Nitrate
- Phenol index
- Phosphate
- Sulfate
- Total /Free Cyanide
- Total Nitrogen & Phosphate
- Etc.



To check which analyzer is the best solution to automate your application(s) or other questions do not hesitate to contact Skalar for more information.



Skalar's Headquarter

Skalar Analytical B.V.

 Tijkstraat 12
4823 AA Breda
The Netherlands
 +31 (0)76 5486 486
 +31 (0)76 5486 400
 info@skalar.com
 www.skalar.com



ISO 9001 Certified
ISO 14001 Certified



USA Headquarters

Skalar, Inc.

5012 Bristol Industrial Way # 107
Buford, GA 30518
Toll Free: 1 800 782 4994
T. + 1 770 416 6717
F. + 1 770 416 6718
E. info@skalar-us.com

Canada

Skalar, Inc.

Unit # 200, 270 Orenda Road
Brampton, L6T 4X6
Toll Free: 1 800 782 4994
T. + 1 770 416 6717
F. + 1 770 416 6718
E. info@skalar-us.com

United Kingdom

Skalar (UK) Ltd.

8 Warren Yard, Warren Park
Wolverton Mill
Milton Keynes,
Buckinghamshire, MK12 5NW
T. + 44 (0)1908 410168
E. info.uk@skalar.com

Germany

Skalar Analytic GmbH

Gewerbestraße Süd 63
41812 Erkelenz
T. + 49 (0)2431 96190
F. + 49 (0)2431 961970
E. info.germany@skalar.com

France

Skalar Analytique S.A.R.L.

35 - 37, rue Berthollet
94110 Arcueil
T. + 33 (0)1 4665 9700
F. + 33 (0)1 4132 1100
E. info.france@skalar.com

Czech Republic

Carbon Instruments s.r.o.

Nademlejská 600
198 00 Praha 9
Czech Republic
T. + 420 242 481 706
E. info@skalar.com

Asia / Middle East

Skalar Analytical India Pvt. Ltd.

No. 7/4, Pappathiammal Street
Jain Colony, Kodambakkam
Chennai - 600024 - India
T. + 9144 2483 7007
F. + 9144 2483 6006
E. info.skalarindia@skalar.com

Skalar is represented in over 80 countries Worldwide
for details of your local agent please contact
Skalar's headquarters in the Netherlands.

Skalar

your partner in chemistry automation