



your partner in chemistry automation



For all your
environmental
and industrial
applications



Skalar the Company

Research & Development



Manufacturing



Quality Control



Skalar is a Dutch company, established in 1965 as a manufacturer of analyzers for the laboratory and process industry. The company has since grown into a worldwide organization with its own subsidiaries in most European countries and North America, and with over fifty representatives throughout the world. All these organizations are focused daily on providing the best support to both existing and potential customers. Skalar analyzers are in daily routine operation in all types of laboratories, and handling sample volumes from a few hundred to hundreds of thousands annually. With over thirty years of experience in automating wet chemistry analysis procedures, the Skalar ISO 9001 certified organization has built up a wealth of knowledge and has generated a vast library of information and techniques that support well-proven applications. This knowledge, in the form of application notes, methodology books, technical brochures, etc., is widely made available. In recent years Skalar's own continuing research and development has added many new innovative analyzers to its product range. The new and existing range of Skalar analyzers has proven to be the most reliable and economical choice of today's modern laboratories.

Applications Laboratory



Logistics



International Help-desk



Automated Wet Chemistry Analyzer

San⁺⁺



The Skalar San⁺⁺ analyzer provides the most proven and reliable technology available today in automatic wet chemistry analysis. The analyzer is designed for all environmental and industrial fields such as water, food, beverages, fertilizers, pharmaceuticals, soil, plant and tobacco.

The San⁺⁺ is the recognized system for reliable 24 hour a day operation. The analyzer is a modular concept and can be configured to meet the needs of any laboratory, including various in-line sample preparation steps such as UV-digestion, distillation, extraction, dialysis and ion-exchange. The analyzer can handle as many as 800 samples a day and analyze up to 16 parameters simultaneously.

With the implementation of a wide range of detection techniques, the San⁺⁺ suits the analytical requirements of over a thousand chemistry applications. These range from simple parameters such as Ammonia, Chloride, Nitrite to the more complex Total Cyanide, Phenol, Total Nitrogen, Total Phosphate and many others.

FEATURES

- Fast sample through-put, up to 120 analyses per hour
- Analyze sub ppb to high ppm levels
- Can run up to 16 parameters simultaneously
- 21CFR part 11 compliant FlowAccess® software for data generation, QC/CLP procedures, unattended automated start up and shut down
- Auto samplers for 40 - 800 sample positions available
- Auto pre-run and/or post-run dilutions of out of range samples
- Automatic preparation of working standards
- Analyses according to Standard Methods, EPA, ISO, AOAC, Coresta, EBC, ASBC and many more

APPLICATIONS

Waters, food / beverages, fertilizer, pharmaceutical, soil / plant, wine, beer / malt, detergents, tobacco, petrochemical, etc.



Discrete Wet Chemistry Analyzer

BluVision



The BluVision™ analyzer is designed to perform colorimetric analysis for the environmental field, with optimal ratios of sample and reagent volumes to achieve lower detection limits with high accuracy. By increasing the path length of the disposable cuvettes, the system offers much lower detection limits and a broader linear range than any other current discrete analyzer.

The BluVision™ analyzer is equipped with a unique LED light source avoiding the use of a moving fly wheel, thus reducing the number of mechanical moving parts and less maintenance.

A true “walk-away” system creates calibrations from stock solutions, diluted over-ranged samples and performs re-analysis, all in one run. The BluVision™ is capable of running up to 14 different parameters at one time without any operator intervention.

Many environmental chemistries are available and all are in accordance to USEPA, Standard Methods, ASTM and ISO methodologies. Coupling all this technology together the BluVision™ analyzer offers true flexibility that your lab requires from discrete analysis.

FEATURES

- Fast sample through-put, up to 200 analyses per hour
- Analyze sub ppb to high ppm levels
- Can run up to 14 parameters simultaneously
- 21CFR part 11 compliant FlowAccess® software for data generation, QC/CLP procedures, unattended automated start up and shut down
- 800 test positions, 200 sample positions and 36 reagent positions
- Auto pre-run and/or post-run dilutions of out of range samples
- Automatic preparation of working standards
- Analyses according to Standard Methods, EPA, ISO, AOAC, Coresta, EBC, ASBC and many more

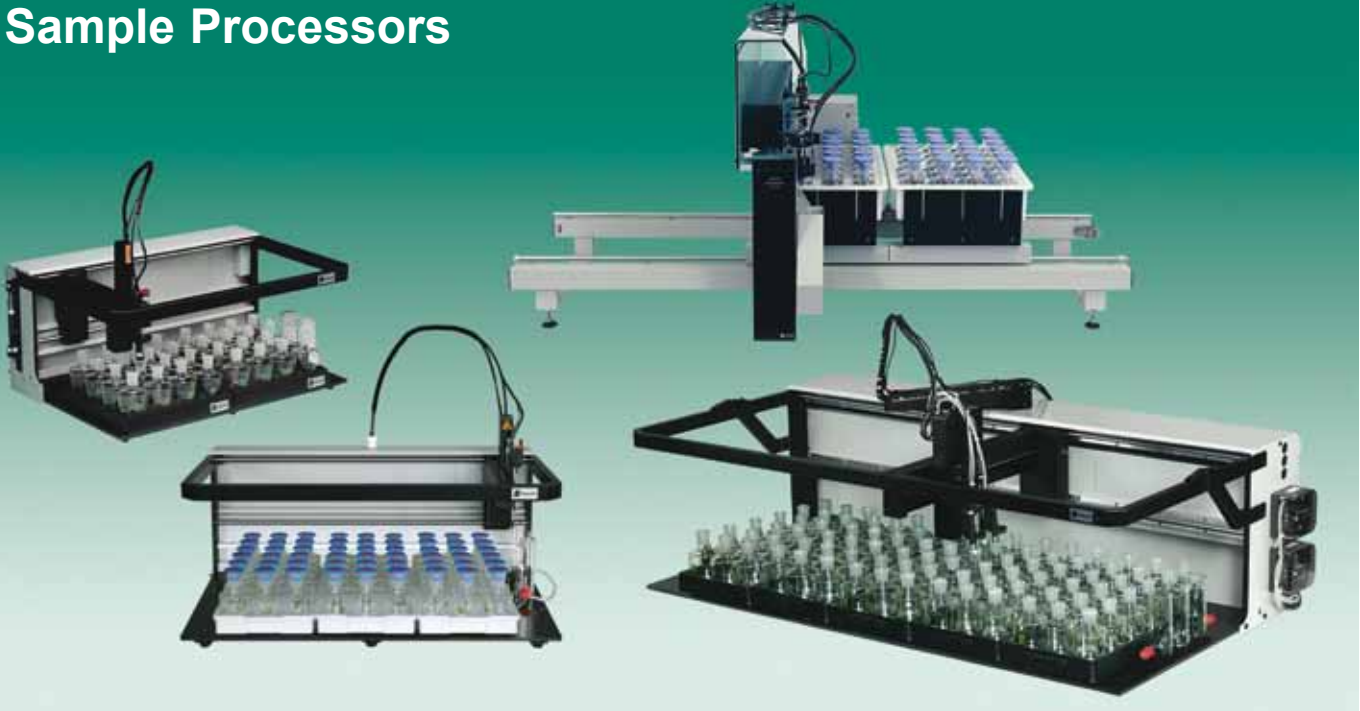
APPLICATIONS

Drinking water, waste water, ground water, surface water, seawater, soil extracts & digests, wine and many others



Robotic Analyzers

Sample Processors



FEATURES

- Full Automatic measurement for parameters such as BOD, COD, pH, EC, turbidity, ISE applications, titrations, etc.
- Complete automated functions a.o. pump and dispenser for automatic liquid handling, stirrers for mixing etc.
- Configurable to adapt multiple probes, dispensers and pumps
- Incubator friendly sample trays
- Software for instrument control, data handling and result calculation
- Methods according EPA, ISO, etc.
- Customized calculations can be integrated
- User definable worklist lay-out
- Automatic start-up and shut-down
- Barcode identification

APPLICATIONS

Drinking water, river water, lake water, industrial water, waste water, soil, etc.

Skalar's extensive range of robotic analyzers offers flexible and affordable automation solutions for routine analytical testing. Typical applications are Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), pH, Conductivity (EC), Turbidity, Ion Selective Electrode (ISE) Applications, Color, Alkalinity and other Titrations.

The Robotic Analyzer line includes four models, each of them providing increased productivity and quality assurance. All systems can be customized to meet the individual requirements of various laboratories. Various configurations provide solutions for small sample batches (32 samples per batch) up to large sample batches (120 samples per batch).

To increase the throughput and turn-around time of the samples, the analyzer can be configured with multiple probes, to measure four independent samples simultaneously. For complete walk-away automation and overnight operation, the unit can be equipped with automatic bottle-(de)cappers where applicable.

Each analyzer model offers its own specific advantages, but all systems provide 'hands-free', 'walk-away' automation.



TOC & TN Analyzers for Liquid Samples

Formacs^{SERIES}



FEATURES

- Analytes TC, TIC, TOC, NPOC, DOC, POC, TN, Nitrate and Nitrite
- High Temperature Combustion with infra red detection (carbon) and chemiluminescence detection (nitrogen)
- 160 positions random access auto sampler
- Optional trays available for 20 ml or 40 ml EPA-VOA vials
- Range up to 25000 ppm C
Range up to 300 ppm N
- Excellent alternative for Kjeldahl determination
- Automatic stirring, acidification and sparging for NPOC analysis
- Methods according to EPA, CEN, DIN, ISO and Standard Methods
- 21 CFR part 11 compliant
- Extendable with solid sample module for TC, TIC and TOC

APPLICATIONS

Drinking water, surface water, process water, waste water, etc.

The Formacs^{SERIES} Total Organic Carbon (TOC) and Total Nitrogen (TN) analyzers have been designed to measure TOC and TN separately or simultaneously in liquid samples. The analyzers provide fast, reliable and accurate computer controlled automation for all water applications including waste, sea, process, river and ground waters.

The flexible design insures optimal performance and is operational within minutes, providing accurate analyses for Total Carbon (TC), Total Inorganic Carbon (TIC), Total Organic Carbon (TOC), Non Purgeable Organic Carbon (NPOC) and Total Nitrogen (TN). As an additional option, the concentration of Nitrate and Nitrite can be measured which results in a true alternative to the Total Kjeldahl Nitrogen (TKN) method ($TKN = TN - NN$). This eliminates the need of hazardous reagents, which are required for the conventional TKN analysis. In this way, valuable operator time is saved and better precision is achieved.

The user-friendly analyzers allow quick and easy access to all components and include a versatile software package for complete instrument control, data acquisition, calculations and report generation.



TOC & TN Analyzers for Solid & Liquid Samples



The Primacs^{SERIES} provides efficient and unmatched precision in Total Carbon (TC), Total Inorganic Carbon (TIC), Total Organic Carbon (TOC) and Total Nitrogen (TN) / Protein analysis for a wide variety of samples, such as soil, plant, environmental waste, animal feed, malt and food. Due to the efficient removal of condensate, the Primacs^{SERIES} can also be used to analyze liquid samples, such as sludge and sediment.

The measurement is based on the high temperature catalytic combustion methodology. After weighing, the samples are introduced to the analyzer by a unique vertical sample introduction system. The samples are oxidized at high temperatures and measured by infra red detection (carbon) and thermal conductivity detection (nitrogen/protein), according to the Dumas principle.

Quick and easy access to all components and the user friendly design, make the Primacs^{SERIES} analyzers the perfect tool for automating a variety of analyses on a wide application range of solid and liquid samples.

FEATURES

- Analytes TOC, TC, TIC, TN, Protein
- Suitable for solid samples and liquid samples
- Sample weights up to 3 grams
- Automatic balance interfacing
- Unique vertical bottom-to-top introduction system
- Reusable sample crucibles
- High temperature combustion with IR detection (Carbon)
- Dumas methodology and TCD detection (Nitrogen)
- Minimal bench space required
- Range 1 – 100 mg N (abs.)
- Range 0.005 – 120 mg C (abs.)
- Methods according AOAC, EBC, ASBC, ISO, AACC, AOCS

APPLICATIONS

Animal feed, malt, food, sludges, sediment, soil, plant, fertilizer, cement, bauxite etc.



Toxicity Analyzer

ToxTracer



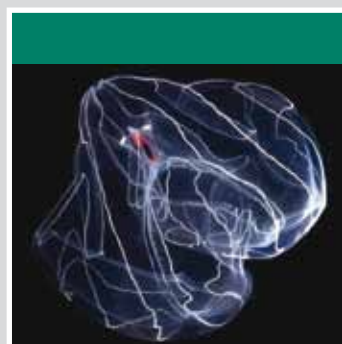
FEATURES

- Results within 30 minutes
- Easy to perform with reliable results
- Cost reduction
- Practical courses in cultivating the luminescent bacteria and the preparation of a Standard Cell Suspension

APPLICATIONS

waste water, surface water, process water, soil, sediments, pharmaceuticals, food, etc.

Biological monitoring has become increasingly important for testing the quality of water. Skalar's ToxTracer System is a bioassay using luminescent bacteria of the genus *Vibrio fischeri*. The principle of the method is based on the inhibition of light emission caused by toxic substances. The reduction of the light output is measured by the ToxTracer Luminometer and is directly related to the toxicity of the sample. The ToxTracer provides results within 30 minutes. Typical applications are waste water, surface water, process water, soil, sediments, pharmaceuticals, food, etc.



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