your partner in chemistry automation

For all your environmental and industrial applications
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.
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.
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 compact design requires minimum bench space and is operational within minutes, providing accurate analyses for Total Carbon (TC), Total Inorganic Carbon (TIC), TOC, Non Purgeable Organic Carbon (NPOC) and 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. This eliminates the need of hazardous reagents, which are required for the conventional TKN analysis. 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.
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.
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.
**ToxTracer**

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.

**Fluo-Imager**

The Fluo-Imager was developed to meet the increasing interest for fast non-destructive analysis. The sample is measured directly, without the need of any sample-pretreatment. A scan of the sample creates a 3 dimensional fingerprint which provides qualitative and quantitative information on a range of compounds. The compounds are measured simultaneously reducing the number of time-consuming laboratory analyses. Typical parameters include Oil in water, Poly Aromatic Hydrocarbons, Lubricants, Phenols, Fuels, Chlorophyll, Carotenoids, Phycoerythrin, Phycocyanin (blue-green algae).

**Toxicity Analyzer**

**FEATURES**
- Fast and non-destructive analysis
- No sample pre-treatment
- Quantitative multi-parameter analysis
- Easy and quick changeover to different application
- Early warning system
- Available as a laboratory, mobile and continuous on-line versions

**APPLICATIONS:**
- Discharge, boiler, cooling, drinking, surface and ground water
- Also pre-screening of samples

**ToxTracer**

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.