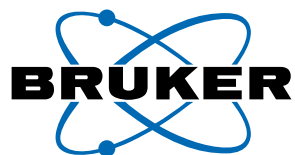


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Bruker Optics



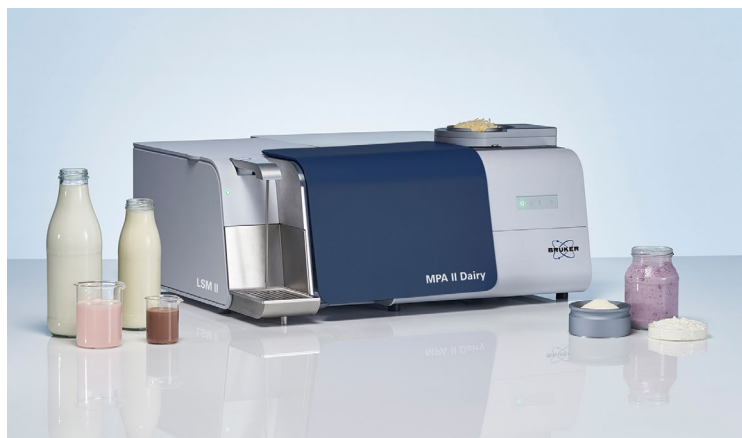
TANGO-R



BRAVO – Handheld Raman



LUMOS II FT-IR – Microscope



MPA II – Dairy Analyzer



Alpha II – ATR module

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Applications

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- Pharma/Biopharma & Cosmetics
- Food & Feed Industry
- Dairy
- Chemicals & Petrochemicals
- Polymers
- Art Conservation & Archaeometry

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- Precious metals & jewelry analysis
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- Environmental remediation
- Consumer goods testing
- Electronics & medical devices
- Art & archaeometry

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XL2 XRF – Analyzer



XL3t XRF – Analyzer



XL5 Plus – Handheld XRF Analyzer



Niton Apollo – Handheld LIBS Analyzer for Carbon Equivalency Testing



Niton DXL – Precious Metal Analyzer



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Edwards are a global leader in the design, technology, manufacture and service of vacuum pumps for a wide range of applications, tailoring solutions to the customers' needs. For more than 100 years Edwards has been at the forefront of vacuum pump technology, help make manufacturing and service cleaner, smarter, economical and environmentally friendly. Their scientific, industrial and chemical vacuum pumps are integral to R&D and manufacturing processes for an increasingly diverse range of industries.

Edwards has developed comprehensive vacuum systems and solutions for scientific, industrial and chemical industries to address the challenges unique to the respective industry. Their vacuum technologies provide real cost benefits and environmentally friendly operations.

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- Research & Development, Universities & Laboratory
- Power Generation
- Glass & Coating applications
- Semiconductor
- Petrochemical & Pharmaceutical Industries
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nXRi – Dry Multi-stage Roots Pumps



nES220 – Single Stage Rotary Vane Pump



EH – Mechanical Booster



nEXT – Turbomolecular Pumps



APG200 – High Performance Compact Pirani Gauge

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ADP600 – Series of polarimeters are available as multiple, dual, or single wavelength models



OPTi – Digital Handheld Refractometer



ADS400 – Series Saccharimeter



Eclipse Brix 50 – Optical Handheld Refractometer



Sucrose Solutions

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Bellingham + Stanley is a manufacturer of high quality digital refractometers, polarimeters and density meters used globally in industries including food & beverage, chemical, petrochemical, and pharmaceutical.

Applications

- Agriculture
 - water quality, flow and level testing and monitoring
 - fruit ripeness (or Brix measurement)
 - acidity and sugar content
- Industry
 - viscosity of polymers and oils
 - development of fine or chiral chemicals
 - monitoring the concentration of blended products like urea based diesel exhaust fluids
 - measuring TAN, COD, hydrogen peroxide
 - trace oil analysis
 - turbidity meters
 - photometers
- Life Science
 - pH, conductivity, dissolved oxygen, salt content and temperature
 - bacteria or fungi
 - biomass determination
 - sugar content
- Food & Beverage
 - Water Monitoring
 - Livestock & Aquaculture
 - Fruit & Vegetables
 - Flavours & Essences
 - Sugar & Edible Oils
 - Drinks
 - Beer, Cider, Wine
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CAV 4.1 – A fully automated, single bath, benchtop viscometer with two 14-position sample handlers for unattended D445 processing



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CMRV-5000 – The semi-automated CMRV-5000 is a compact and completely self-contained mini-rotary viscometer for measuring low temperature pumping viscosity from -5°C to -40°C

Cannon Instrument Company has earned international acclaim for the quality of its viscosity-related products and services since its founding in 1938 by scientist, inventor, and educator Dr. Michael R. Cannon. The company's longstanding emphasis on production of premier-quality test equipment has kept CANNON at the cutting-edge of research and development.

Quality / Traceability

Use of high quality standards and reference materials ensures test reliability and accuracy. This is why the National Institute of Standards and Technology (NIST) delegated responsibility to CANNON for U.S. national standards for certified liquid viscosity reference standards in 2003.

CANNON's Quality System Scope

- The design, manufacture and certification of viscosity standards and the viscosity certification of customer-supplied materials.
- The design, and manufacture of flash point reference materials.
- The provision of calibration services for viscometers.

CANNON accepts complaints and handles them according to the requirements of ISO 9001, ISO/IEC 17025 and ISO 17034.

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Petroleum Testing Equipment

Providing quality testing instrumentation and technical support services for research and testing laboratories has been their specialty since 1925. Meeting your testing needs is the primary focus of their business, which is why Koehler Instrument Company is a leading producer and supplier of petroleum, synfuels and petrochemical instrumentation worldwide.

At Koehler, they pride themselves in innovation. In a time of continuous technological advancement and transition they are constantly implementing new and improved ways to surpass the needs of an ever-evolving industry. Koehler products are backed by their staff of technically knowledgeable, trained specialists who are experienced in both petroleum products testing and instrument service, which is carried out either on site or at a Koehler service center.

We are pleased to present their comprehensive line of petroleum laboratory instrumentation, both manual and automatic, as well as standards and accessories conforming to the latest ASTM, ISO, IP and related international standards.

We invite you to look through their extensive product offerings for instrumentation and services to meet your testing needs, or contact us for custom solutions for your specialized requirements.

Committed to providing you with full support for your laboratory testing needs, Koehler Instrument Company is more than just an instrument manufacturer. They take care of you through the whole process. They have many satisfied customers worldwide and continue to build new relationships every day because of their attention to customer needs.

Application / Industry

- | | |
|----------------------------|-------------------------|
| – Automotive | – Food & Beverage |
| – Aviation | – Greases |
| – Biodiesel | – Lubricants |
| – Bitumen, Asphalt & Waxes | – Marine & Bunker Fuels |
| – Chemicals & Solvents | – Paints & Varnishes |
| – Cosmetics & Fragrances | – Petrochemicals |
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A leading world-wide supplier for units and systems for thermal separation

The PILODIST GmbH is a world leading manufacturer of lab scale distillation systems according to various ASTM norms as well as customized research systems dealing with rectification, thermal separation, molecular distillation, thin film evaporation and many others.

Having at own disposal glassblowing, mechanical electric, software and RnD departments the company offers 100% inhouse manufactured systems by long term experienced team.

PILODIST is offering a wide range of standard products and systems but is also capable to offer tailor-made solutions according to special requirements. The very long experience and the extended list of worldwide users in many different industries guarantees a continuous development of all products to the most actual state of the art technologies.

The company has been six times awarded as a fastest growing company on the distillation systems market and continues to grow developing new instruments and making the existing ones even better.

The lineup of the PILODIST consists of following instruments:

- The PD100-series are manual, semi-automatic and fully automatic distillation systems according to ASTM D2892

- The PD200-series are manual, semi-automatic and fully automatic distillation systems according to ASTM D5236
- The PILODIST PD400-series are semi-automatic and fully automatic systems combined from associated PD100 and PD200 modules to provide the distillation of crude oil through both D2892 and D5236 test methods.
- The PD300-series are manual, semi-automatic and fully automatic distillation systems according to ASTM D1160
- The PD300-series has two customized solutions which operates over the ASTM D1160 requirements, but designed to solve similar tasks with higher performance: the PD350CC, equipped with fraction collector for 5 final receivers 200 ml each; and the PD300CC-HT, which employs the distillation and column made of stainless steel with maximum operation temperature up to 650°C and max. AET of approx. 850°C.
- The PILODIST PD1120CC is the single fully automatic instrument according to ASTM D1120
- The PILODIST PD 4929 S is the fully automatic crude oil distillation system used for Naphtha fraction distillation as a part of ASTM D4929
- The PILODIST QD500CC is an ultra-fast distillation system for fully automatic fractionation of small quantities of stabilized petroleum, natural and synthetic products, except liquified petroleum gases, very light naphtha and fractions having initial boiling points above 500°C AET

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Quickdist 500CC – Fully Automatic Methods: ASTM D-2892



PETRODIST 100 CC – Fully Automatic Methods: ASTM D2892



PETRODIST 350CC – Fully Automatic Methods: ASTM D1160

Petroleum Testing & Beyond



Automated Micro Carbon Residue Tester
Methods: ISO 10370, ASTM D4530, etc.



Automated Abel Closed Cup Flash Point Tester
Methods: ISO 13736, IP 170, ISO 1516, ISO 1523



Automated Distillation Tester
Methods: ASTM D86, ASTM D850, ASTM D1078, ISO 3405, IP 123, JIS K 2254a



Automatic Pour / Cloud Point Tester
Methods: ASTM D6749, D7683

Since the foundation in 1892, Tanaka Scientific Limited has been engaged in manufacturing and sales of scientific instruments, through which they have contributed to the progress of science and technology. During the latter half of 1950s, Tanaka drew its main focus to the petroleum testing apparatus, and ever since then we have been delivering high quality and user friendly instruments to mostly the quality testing laboratories at refineries, as well as other selected scientific instruments for non-petroleum sectors.

Another area Tanaka Scientific has been committed is the standardization of petroleum test methods. TANAKA has been actively involved in the standard making and maintenance processes at Japan Industrial Standard(JIS) since 1968, ISO TC28 since 1983, and ASTM International

since 1982. As a leading manufacturer, Tanaka Scientific has proposed some new test methods at these organizations, and some have been adopted and now preferred by number of world-class users for the better precision and higher laboratory productivity.

Tanaka's product range covers testing of volatility such as flash point, distillation, and vapor pressure; flow properties such as kinematic viscosity, pour/cloud point, and CFPP; elemental analysis such as sulfur content; and hydrocarbon analysis such as aniline point.

They continuously strive to maintain and improve on their "Made in Japan" quality and service.

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for Routine Testing and Advanced Research & Development of Engine Oils, Lubricants, and Related Fluids



Quantum Oxidation Tester
Methods: ASTM D2272, D2112, D4742, D7098, D942, IP229



Noack S2 Volatility Test
Methods: ASTM D5800, CEC L-40-93



TFAB Tannas Foam Air Bath
Methods: ASTM D892, D6082, D1881, D7840



TBS 3000 HTHS
Tapered Bearing Simulator Viscometer
Methods: ASTM D4683, D6616



King MRV TP-1
Mini-Rotary Viscometer
Methods: ASTM D3829, D4684, D6821, D6896



TBS 2100 E-F
HTHS Tapered Bearing Simulator
Viscometer
Methods: ASTM D4683,

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Xenics designs and markets SWIR image sensors, cores and cameras of best-in-class image, both line-scan and area-scan. Worldwide Xenics is a market leader for SWIR imaging where it holds a unique position with the combination of high speed and low noise imagers.

Xenics not only specializes in the development of SWIR InGaAs detectors and cameras, but also offers an extensive portfolio of LWIR (Long-Wave Infrared) imagers.

Applications

- Machine Vision
 - Infrared Semiconductor Inspection
 - Solar Ingot Inspection
 - Food Sorting
 - Recycling

- Process Monitoring
 - Industrial Thermographic Inspections
 - Optical Coherence Tomography
- Safety & Security
 - Forest Fire Detection
 - Situational Awareness
- Scientific & Advanced Research
 - Art Analysis
 - Adaptive Optics
 - Infrared Laser Beam Analysis
- Transportation
 - Driver Vision Enhancement
- Medical
 - Chemical & Biological Analysis
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XOS is offering elemental analysis solutions that improve public safety and customer efficiency in industries like petroleum and environmental compliance.

For petroleum applications, XOS offers portable, lab, and process analyzers with unrivaled precision at the push of a button. XOS also offers High Definition XRF (HDXRF®) analyzers for the detection of toxic elements in areas of environmental regulation, like soil and water.

XOS' advanced optics and OEM sub-systems can increase precision, speed, and spatial resolution, while decreasing the size, complexity, and cost of the instrument.

Industries

- XRF Analyzers for the Petroleum Industry
Analysis Solutions for Measuring Sulfur, Chlorine and Other Critical Elements
- Renewable fuels
Rapid & Accurate Analysis Solutions for Sulphur & Chlorine in Biofuels
- X-ray Optics & Sources

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Petra 4294 – Ultra-Low 4294 Sulfur Analysis
Methods: ASTM D4294, ISO 8754 & IP 336
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Petra MAX – Rapid Measurement of S, Ni, V & Fe Plus 9 Elements
Methods: ASTM D4294, ISO 8754 & IP 336
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Sindie +Cl – Measure Both Sulfur & Chlorine with One Instrument
Methods: ASTM D2622, D7039, D4929, D7536 & ISO 20884



Clora 2XP – Sub-ppm Chlorine Analysis
Methods: ASTM D7536 & D4929



Sindie 7039 G3 – Sulfur Analysis as Low as 0.15 ppm
Methods: ASTM D7039 & ISO 20884



Signal – Total Silicon Analysis as Low as 0.65 ppm
Method: ASTM D7757

Zematra is the real specialist

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Total Sediment Tester
Methods: ASTM D4870, IP375, ISO 10307

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Automated Stability Analyser
Method: ASTM D7060-12

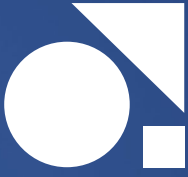
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