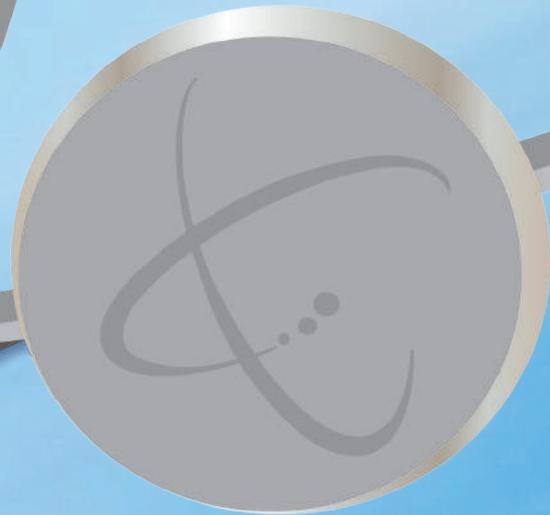




**H.A. Shah & Sons**  
Trusted partner for total laboratory solutions



**DELIVERING**  
QUALITY To Every SINGLE  
**CUSTOMER**



# TABLE OF CONTENTS

OUR MISSION .....	04
OUR VISION .....	04
OUR CORPORATE VALUES .....	04
BOARD OF DIRECTORS .....	05
ABOUT H. A. SHAH & SONS .....	06
<b>OUR BUSINESS PARTNERS .....</b>	<b>07</b>
<b>OUR PRODUCTS .....</b>	<b>12</b>
AGILENT .....	13
COBALT LIGHT SYSTEMS (A PART OF AGILENT) .....	28
ANTON PAAR .....	44
QUANTACHROME A BRAND OF ANTON PAAR .....	55
ANTON PAAR PROCESS INSTRUMENTS .....	61
BRABENDER A BRAND OF ANTON PAAR .....	62
FOSTER + FREEMAN .....	63
ORIGALYS .....	69
SERCON .....	75
BWB TECHNOLOGIES .....	76
TSHR .....	77
LIM .....	78
COMPELSON .....	79
NANALYSIS .....	80
FIT INSTRUMENT .....	81
SPECTRA ANALYSIS .....	82
<b>OUR SERVICES .....</b>	<b>83</b>
H. A. SHAH & SONS CERTIFIED SERVICE - WORKING FOR YOU .....	85
CHOOSE THE RIGHT SERVICE PACKAGE .....	86
ANALYTICAL EXCELLENCE CENTER - KARACHI & LAHORE .....	87

# OUR MISSION

---

Our organization is driven towards a single goal: customer satisfaction. We at H. A. Shah & Sons aim to ensure that our market leadership extends far beyond hardware, into turfs like customer loyalty, product diversity, and the establishment of mutual trust between our customers, suppliers, and employees. Our mission is not the quantitative growth of the company but to ensure that through our diversity, speed and quality we can bring about an improvement in the quality of life of society at large, by partnering with our customers to create economic opportunities.

# OUR VISION

---

We aspire to become a leading global and national enterprise in the chemical analysis industry and the partner of choice for laboratory devices and solutions.

# OUR CORPORATE VALUES

---

We perform with integrity at all levels and continue to ensure corporate excellence through innovation and focused quality conscious efforts in all our ventures. We strive to play our role as a good corporate citizen, by serving the people and society, for a better tomorrow.

WE SELL WORLD-CLASS PRODUCTS MANUFACTURED BY WORLD-CLASS MANUFACTURERS TO ENSURE THE PERFECT BLEND OF RENOWNED PRODUCTS, GUARANTEED QUALITY AND SUPREME SOLUTIONS.

# BOARD OF DIRECTORS

## MUSHARRAF BOKHARI CHAIRMAN



“H. A. Shah & Sons is a progressive and forward-thinking organization dedicated to the pursuit of global growth opportunities. With nearly a century of experience in the international chemical industry business, we’re experts in forging partnerships to improve performance, customer loyalty, reduce costs, provide the best support services, and build strong, innovative businesses. This has equipped us to drive greater innovation, and create a distinctive corporate identity for ourselves.”

## ZULFIQAR BOKHARI CEO



“H. A. Shah & Sons have come a long way since it embarked upon its journey of growth. It has evolved to become the leading name of the industry today, holding the very top niche in its area of operations within Pakistan by representing the world-renowned market leaders in its product line. It gives me great pride to see a huge success and dynamic force that we have become today.”

## WAQAR BOKHARI MANAGING DIRECTOR



“During the past years, we embarked upon a very successful expansion of our business. New branches were added in Bangladesh and UAE and as of now, the company has four major divisions working simultaneously: chemical analysis, life sciences, forensic sciences, and chemistries & supplies. Staffed by the industry’s most qualified and capable professionals, the company has also been presented with numerous prestigious achievement awards from our principals for the best distributor in the entire south-Asian pacific region; this is a mark of how far H. A. Shah & Sons has come since its inception several decades ago.”

# ABOUT H. A. SHAH & SONS

---

**We are ISO 9001:2015** certified representatives of the world's leading laboratory equipment manufacturers.

**We are science aficionados.** We are dedicated to providing you with all the latest and innovative products. We have four separate divisions involved in chemical analysis, life sciences, forensic sciences and chemistries & supplies.

**We are hard-working.** Our trained and assiduous resources are working extremely hard to deliver you the finest products on time. Our service team is dedicated, visionary and committed so that all your issues get resolved on time and we fulfil our promise of delivering you the finest products.

**We are quality epitomized.** We embody your trust in our products. All the products being delivered to you are not only world-class but also speak for themselves.

**We are fantastic.** Our pockets are filled with unflagging enthusiasm. Our customer support team never misses a chance to impress you by lucidly displaying its high-level assistance and near to perfect services.

**We are perfectionists.** For the last forty years, we have been depicting our vivid dedication to impersonate perfection. Back in 1975 H. A. Shah & Sons started as an exclusive countrywide distributor of world-renowned laboratory manufacturers and till now we have never stopped, never looked back, never despised our conviction; yet still here to bring to our client's services of the finest quality.



# OUR BUSINESS PARTNERS



**Agilent**

Authorized  
Distributor

As the world's premier measurement company, Agilent offers the broadest range of innovative measurement solutions in the industry. The company's major businesses are Chemical Analysis, Life Sciences, & Diagnostics and Genomics. At Agilent Research Laboratories, research is conducted that anticipates customer needs and produces breakthroughs that power growth. Agilent's singular focus on measurement helps scientists, researchers and engineers address their toughest challenges with precision and confidence. With the help of their products and services, they are better able to deliver the breakthroughs that make a measurable difference.



[www.agilent.com](http://www.agilent.com)



**Agilent**

Authorized  
Distributor

Formerly Cobalt Light Systems, Now Agilent's Raman Spectroscopy portfolio includes instruments, technologies, and accessories for a wide range of applications. Agilent's Raman instruments use our proprietary SORS and TRS technologies in fields ranging from aviation security, pharmaceutical analysis, and hazardous chemical identification. These technologies enable you to scan through-barriers, increasing the safety for first responders and throughput in quality control.



[www.coballight.com](http://www.coballight.com)



**Anton Paar**

Producers of high precision measuring and analytical instruments for industry and research, ISO Certified Anton Paar GmbH has had a quality management system according to ISO 9001 since 1994. They are the world leaders in the field of density, concentration measurement, CO2 and of rheometry. The careful and responsible use of human and natural resources is a central and historical element of Anton Paar's philosophy and therefore the basis for its management system. The primary aim of which is to have a uniform and organized system across the whole concern in order to guarantee customers worldwide product and service quality.



[www.anton-paar.com](http://www.anton-paar.com)

# Quantachrome

I N S T R U M E N T S

A brand of **Anton Paar**

The entire Quantachrome company is focused on sharing our expertise in porous material characterization to satisfy your instrument and application support requirements with integrity and first-class personal service. Our highly credentialed team of science and customer service representatives work closely with our customers to deliver an enhanced, individualized level of service upon which we have built our reputation.



[www.quantachrome.com](http://www.quantachrome.com)

## foster + freeman

Improving the Quality of Forensic Evidence

Established in 1978, Foster+Freeman has become one of the foremost forensic science equipment suppliers in the world, exporting market leading, and in many cases unique products from the United Kingdom to more than 155 countries worldwide. We believe the key elements essential in achieving our strategic direction are derived from this policy and are in controlling the company internal and external factors, identifying our risks and opportunities to achieve our objectives and meeting the needs of our customers and associated stakeholders.



[www.fosterfreeman.com](http://www.fosterfreeman.com)



[www.originalys.com](http://www.originalys.com)

Originalys was founded in 2010, by R&D Engineers coming from a famous French Manufacturer (Tacussel and Radiometer Analytical) of Potentiostat, Galvanostat and Impedancemeter (EIS), based in Lyon, France. It's started within a business incubator Cap Nord. Our goal is to propose to the customer "design" products with an affordable price and a high level of quality. With a minimum of 30 years background and knowledge in electrochemistry and a worldwide distributor network, the company is able to provide a complete range of: Instruments, Potentiostat-Galvanostat-Impedancemeter, Multi-Potentiostats and Rotating Disc Electrode, Software, Electrode, Tips and Accessories.



Sercon distribute a complete range of isotopically labelled standards. Our products are used in a range of applications including agriculture, biogeochemistry, breath test studies, metabolic research, nuclear magnetic resonance, nutrition & metabolic studies and quantitative proteomics.



[www.sercon-instruments.com](http://www.sercon-instruments.com)



An independently owned private company with Flame Photometer manufacturing in the United Kingdom under strict ISO 9001 quality protocols. BWB are a global company with offices in Europe, America and the Middle East and a world-wide network of high quality levels of technical support available 24/7 and employ real experts in flame photometry to ensure they remain at the cutting edge year on year.



[www.bwbtech.com](http://www.bwbtech.com)



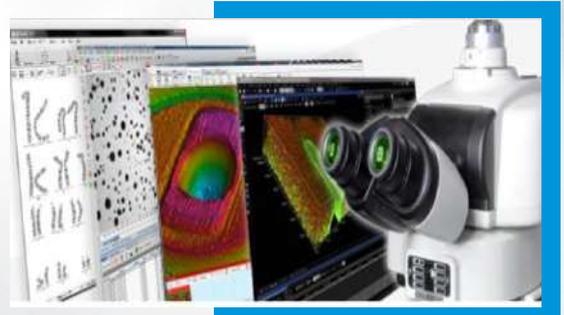
TSHR BV is an innovative, young and dynamic company for the development, manufacturing, sales, service and distribution of Combustion Elemental Analysis solutions, for Total Nitrogen, Total Sulfur and Total Chlorine analyses.



[www.tshrbv.com](http://www.tshrbv.com)



Laboratory Imaging s.r.o. is a company with broad expertise in microscopy, image processing and analysis. We develop, produce and sell high-quality laboratory systems for scientific, biomedical, forensic and industrial imaging.



[www.forensic.cz](http://www.forensic.cz)



Compelson company was founded in 1991 and is known for its cutting-edge products, such as MOBILedit, currently used by millions of users worldwide for many mobile phone related tasks. Our knowledge and expertise go to the edge of technological possibilities.

Our phone forensic products started the industry of phone content analysis software in 1996. In 2019, we once again proved ourselves to be pioneers in the field by focusing on smartwatch forensic analysis. As the use of smartwatches becomes more prevalent, the need for forensic tools to investigate them is increasing. Our team recognized this need and developed a suite of forensic tools specifically designed for smartwatches.



[www.mobiledit.com](http://www.mobiledit.com)

Nanalysis Scientific Corp. is a new public company trading on the TSX Venture Exchange under the ticker symbol NSCI starting in June of 2019. The company has a 10 year history as a global developer and supplier of portable Nuclear Magnetic Resonance (NMR) spectrometers for the laboratory instrumentation market. In 2013, the company launched the industry-leading NMReady™-60, the first fully featured 60 MHz benchtop NMR spectrometer in a single compact enclosure requiring no liquid helium or any other cryogenes. The NMReady-60 is used for all types of industrial applications (oil & gas, chemical, pharma, biotech, food science, atomic agencies) and is a category leader in the academic teaching and research markets.



[www.nanalysis.com](http://www.nanalysis.com)



FIT develops and manufactures equipment and solutions using Nuclear Magnetic Resonance, currently located in São Carlos – SP, the technology capital. We are present in 4 continents with our customers, distributors and representatives!

FIT is an organization that enhances the connection between innovation and our customers/partners.



[www.fitinstrument.com](http://www.fitinstrument.com)



Spectra Analysis Instruments, Inc. is a leading supplier of molecular spectroscopy systems and applications for chromatography. Our current products focus on real-time connection of Infrared Spectroscopy to Gas and Liquid Chromatography.



[www.spectra-analysis.com](http://www.spectra-analysis.com)



# OUR PRODUCTS





#### **GC System Intuvo 9000**

Uses direct heating and ferrule-free columns to save time in labs.



#### **GC System 8890**

Intelligent GCs allow for remote connectivity and autonomous monitoring to maximize productivity.



#### **GC System 8860**

Intelligent GC allows for remote connectivity designed for routine analysis with uncompromised quality.



#### **GC System Micro 990**

System provides data in a compact footprint, separates gases in seconds with less space, power, and gas consumption than benchtop GC systems.



#### **Automatic Liquid Sampler 7693A**

The Agilent 7693A ALS adds sample preparation capabilities to Agilent's industry-leading GC autosampler



#### **Automatic Liquid Sampler 7650A**

Intermediate Vial Capacity with High Precision ALS



#### **Sample Prep Workbench 7696A**

The Agilent 7696A Sample Prep Workbench provides automated sample preparation for HPLC & GC



#### **Headspace Sampler 7697A**

Intermediate Vial Capacity with High Precision ALS



#### **Headspace Sampler 8697**

The Agilent 8697 headspace sampler delivers unprecedented precision and performance.



#### **Sulfur Chemiluminescence Detector**

The reimaged and redesigned Agilent 8355 SCD represents the first major advance in sulfur chemiluminescence detection in 25 years, making the technology more reliable and easier to use.



#### **Nitrogen Chemiluminescence Detector**

The Agilent 8255 Nitrogen Chemiluminescence Detector (NCD) is a nitrogen-specific detector that produces a linear and equimolar response to nitrogen compounds.



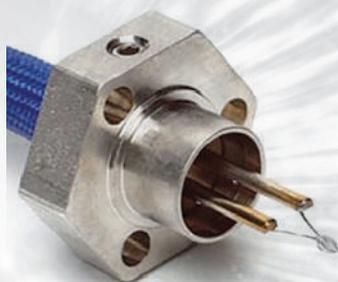
#### **Micro-ECD**

The Agilent micro-electron capture detector (micro-ECD) revolutionizes trace-level analyses of halogenated



#### **Flame Photometric Detector Plus (FPD Plus)**

The Flame Photometric Detector Plus utilizes new photomultipliers



#### **NPD (Nitrogen-phosphorus Detector)**

Nitrogen-phosphorus detectors (NPD) for gas chromatography are specific to nitrogen- or phosphorus-containing compounds and are well suited for environmental and forensic applications.



### J&W GC Column

Agilent's GC columns help lab analysts maintain the highest standards of performance. Agilent J&W capillary columns deliver industry-leading technology with the highest inertness, lowest bleed levels and tightest column-to-column reproducibility.



### Self Tightening Column Nuts

This unique, stainless steel GC column nut delivers a tight connection – without expensive upgrades or adaptors. An innovative spring-driven piston continuously presses against the short graphite/polyimide ferrule – maintaining a leak-free seal even after hundreds of injection.



### J&W Ultra Inert Intuvo GC columns

As part of the Agilent J&W Ultra Inert GC column family, Ultra Inert Intuvo GC columns push industry standards for consistent column inertness and exceptionally low column bleed, resulting in lower detection limits and more accurate data for difficult analytes. Offered in a wide range of stationary phase polarities (non, low, mid, and high polarity).



### Packed GC Columns

Agilent J&W Packed GC Columns are designed and manufactured to offer excellent and reproducible performance for all sample types associated with packed column separations, most important in the hydrocarbon processing industry. The highly efficient and rigorous packing technology used in Agilent J&W packed GC columns assures column-to-column reproducibility and ultimate efficiency,



### Column Baskets and Hangers

Agilent offers column baskets and hangers, including a 13 cm (5 in) basket for 6850 capillary columns, column hanger for a 13 cm (5 in) basket, column hanger clip kit for a 18 cm (7 in) basket and column hanger for 6890, 5890 and 5880A systems.



### Gas Chromatography Supplies

At Agilent, we understand that it is vital for your process to be efficient. gas chromatography supplies provide the best of both worlds: small, easily handled quantities in economical gas chromatography packaging. Ideal for high usage laboratories, Agilent GC supplies provide the quality and consistency of Agilent chromatography supplies offered in convenient and economical packaging.



#### **HPLC Infinity II LC System 1220**

An affordable, high-quality, integrated LC system to get you on the fast track to highest efficiency.



#### **HPLC Infinity III LC System 1260**

Routine HPLC/UHPLC applications, with a pressure range up to 600 bar.



#### **HPLC Infinity III Prime LC System 1260**

HPLC/UHPLC quaternary solvent mixing with pressure range up to 800 bar.



#### **HPLC Infinity III LC System 1290**

A flexible, high-end UHPLC system that can run any HPLC or UHPLC measurement.



#### **LC Handheld Control 1200 Infinity Instant Pilot**

Easy-to-use system control, status monitoring, signal plotting, and diagnostics for all your LC modules.



#### **LC Handheld Control InfinityLab Companion**

Local or remote system control, signal plotting, and basic diagnostics for Agilent LC modules.



#### HPLC Columns Family

Agilent liquid chromatography (LC) columns deliver reliable, consistent performance in a wide range of analytical LC. Agilent offers one of the broadest, most modern LC column portfolios for small molecule analysis, with columns suitable for nearly all separation modes and applications.



#### InfinityLab Poroshell 120 Column

InfinityLab Poroshell 120 columns provide exceptional efficiency and reliability, significantly boosting performance from all instruments, whether you want improved HPLC performance, UHPLC performance at lower pressures or the highest UHPLC performance.



#### AdvanceBio SEC Columns

Agilent AdvanceBio columns are designed and produced to provide results you can be sure of when analyzing highly complex biotherapeutic molecules and monitoring their purity, potency, and other critical quality attributes.

### LC SUPPLIES



#### A-Line Quick Connect Fittings

InfinityLab Quick Connect fittings are the only truly “finger-tight,” reusable fitting for UHPLC, stable to 1300 bar. There are no tools needed... just use your fingers to close the lever for a perfect connection every time.



#### Liquid Chromatography Supplies

Agilent InfinityLab supplies work seamlessly with InfinityLab LC Series instruments to achieve the highest performance, operational efficiency and lab safety. Smart consumables track usage for added confidence in your analysis. Learn more about InfinityLab. Our extensive portfolio of high quality instrument parts and generic LC supplies are designed for both Agilent and other manufacturers instruments.



#### LC Tubing, Fittings, Valve Supplies

Agilent provides a range of Chip LC supplies and replacement parts manufactured to high levels of quality and performance. Specially-designed PEEK fittings, along with fused silica/PEEK and sample transfer capillaries, are available as well as inner and outer valve rotors.

### GC/MS INSTRUMENTS



#### **GC/MSD 5977B**

The Agilent 5977B High Efficiency Source GC/MSD builds on the most trusted single-quadrupole GC/MS



#### **Triple Quadrupole GC/MS 7000E**

The Agilent 7000E Triple Quadrupole GC/MS is now even easier to use and more efficient than ever.



#### **Triple Quadrupole GC/MS 7010D**

The Agilent 7010D Triple Quadrupole GC/MS is the latest version of the first compact benchtop triple quadrupole.



#### **GC/Q-TOF 7250**

Agilent 7250 GC/Q-TOF for high-resolution, accurate-mass GC/MS with low energy EI capability



#### Triple Quadrupole LC/MS Ultivo

The small stackable Ultivo LC/TQ delivers the robust performance needed for high-throughput sample analysis



#### Triple Quadrupole LC/MS 6495D

The 6495D delivers the highest sensitivity among all commercially available TQ LC/MS systems.



#### Triple Quadrupole LC/MS 6470A

The 6470A is a robust LC/MS/MS system for routine analysis that can detect targets at low levels.

## QUADRUPOLE TIME OF FLIGHT LC/MS



#### LC/Q-TOF 6545

The 6545 LC/Q-TOF is a mid-range Quadrupole Time-of-Flight LC/MS for untargeted sample analysis.



#### AdvanceBio LC/Q-TOF 6545XT

The 6545XT AdvanceBio LC/Q-TOF enables multiple workflows in biopharmaceutical characterization.



#### LC/Q-TOF 6546

The Agilent 6546 LC/Q-TOF is the highest resolution, widest dynamic range system in the portfolio.



#### Ion Mobility LC/Q-TOF 6560

The 6560 Ion Mobility Q-TOF LC/MS delivers collision cross sections and structural information.

### LC/MS INSTRUMENTS

### QUADRUPOLE TIME OF FLIGHT LC/MS



#### **Q-TOF LC/MS 6530**

The Agilent 6530 Q-TOF LC/MS delivers accurate mass measurements for greater confidence.



#### **iFunnel Q-TOF LC/MS 6550**

The Agilent 6550 iFunnel Q-TOF LC/MS system is the most sensitive LC/Q-TOF in the portfolio.

### SINGLE QUADRUPOLE LC/MS



#### **LC/MSDiQ**

The Agilent LC/MSD iQ is an easy-to use, cost-effective mass detector for chromatographers.



#### **LC/MSD**

The Agilent LC/MSD uses the power of routine mass selective detection to enhance efficiency.



#### **LC/MSD XT**

The sensitive Agilent LC/MSD XT offers highest performance for large molecule applications

### TIME OF FLIGHT LC/MS



#### **Time of Flight (TOF) LC/MS 6230B**

The Agilent 6230 LC/TOF delivers full-spectrum MS with accurate mass and TOF resolution.

### SAMPLE INTRODUCTION SUPPLIES AND SYRINGES



#### **Autosampler Syringes**

Agilent has what you need for precise, effective, sample delivery from your GC autosampler. Agilent offers two major lines of syringes for Agilent liquid autosamplers: Blue line and gold standard syringes. Blue line syringes are designed to support the higher productivity features of the Agilent 7693A automatic liquid sampler.



#### **Manual Syringes for GC**

Many of Agilent's manual syringes for GC have color-coded barrels to facilitate volume selection while making life in the lab more colorful. Each denomination (0.5  $\mu$ L to 50 mL) features a distinct color boldly embossed on the glass barrel for fast, easy identification.

### INLET SEPTA SUPPLIES



#### **Long Life Septa**

Agilent now treats each premium 11mm inlet septa to eliminate sticking in the GC inlet. With our premium non-stick septa, you'll never have to scrape bits of septum out of your inlet. Agilent's premium septa also have a recess on the injection side, to guide the syringe needle to the same point with every injection.



#### **General Purpose Septa**

Agilent's General Purpose Septa are made from an enhanced injection-molded silicone rubber material. The septa material, dark red or gray in color, is specified to withstand over 200 automatic injections at an injection port temperature of 350  $^{\circ}$ C.



#### **Advanced Green Septa**

Agilent now treats each premium 11 mm inlet septa to eliminate sticking in the GC inlet. With our premium non-stick septa, you'll never have to scrape bits of septum out of your inlet. Agilent's premium septa also have a recess on the injection side, to guide the syringe needle to the same point with every injection.



#### **IDP Dry Scroll Pumps**

Agilent Isolated Dry Scroll Pumps (IDP) are oil-free, compact, quiet, high performance vacuum pumps. IDP pumps use a single-sided scroll design that allows for a straightforward 15-minute maintenance procedure with simple tools. Large pumping speeds and compact sizes are ideal for many applications in the research, analytical instrument, and laboratory markets.



#### **Vacuum Pump Supplies for GC/MS**

To ensure the highest levels of accuracy and performance of Agilent's GC/MS systems, a range of vacuum pump supplies are available. These supplies include foreline and diffusion pump supplies such as oil mist filter kits, gauge tubes for measuring vacuum, and pump oil.



#### **GC Instrument Evaluation, Installation and Calibration Standards**

Biodiesel Test Samples, GC Instrument Evaluation, Installation and Calibration Standards, GC Qualitative Standards, GC/MS Analyzer Kit Standards, GC/MS Test and Performance Samples and J&W GC Column Test Standards



#### **Gas Clean Purification System**

The Agilent Gas Clean Filter System delivers clean gases, reducing the risks of column damage, sensitivity loss, and instrument downtime. Inserting a Gas Clean Filter System in the gas line immediately before the instrument inlet greatly reduces the level of impurities, thus improving trace analysis. Contaminants entering your GC column will also be reduced, which is critical for high temperature analysis and essential for longer column lifetime.



#### **Intuvo Guard Chips**

The Agilent Intuvo Guard Chip harnesses the protective power of a traditional retention gap within an easy-to-install, disposable, microfluidic chip. It traps sample residue by providing almost one meter of inert flow path between the liner and the column. With rapid, regular replacement, sample contamination never reaches the head of the Intuvo GC column, eliminating the need for column trimming.



#### **Intuvo Gas Clean Filter Kit**

The Agilent Gas Clean Filter System delivers clean gases, reducing the risks of column damage, sensitivity loss, and instrument downtime. Inserting a Gas Clean Filter System in the gas line immediately before the instrument inlet greatly reduces the level of impurities, thus improving trace analysis. Contaminants entering your GC column will also be reduced, which is critical for high-temperature analysis and essential for longer column life.



#### Atomic Absorption Systems 200 Series

Fast Sequential AA measures all elements in each sample before the next. AA offers high sensitivity, performance, and simplicity with 8 fixed lamp positions



#### MP-AES System 4210

The Agilent 4210 MP-AES provides cost efficient and flexible analysis beyond flame atomic absorption.



#### ICP-OES Instrument 5800

The 5800 ICP-OES is designed for busy labs looking to reclaim wasted time.



#### ICP-OES Instrument 5900

The Agilent 5900 SVDV ICP-OES system is designed for high throughput labs that demand the best.



#### ICP-MS Mass Spectrometry 7850

Fast setup and streamlined analysis for great results in typical applications.



#### ICP-MS 7900

Agilent 7900 ICP-MS has 10x higher matrix tolerance, 10x wider dynamic range and 10x better signal to noise.



#### Triple Quadrupole ICP-MS 8900

The 8900 ICP-QQQ offers a range of configurations to cover applications from routine contract analysis.

#### **Cary Eclipse Fluorescence Spectrophotometer**



Cary Eclipse Fluorescence Spectrophotometer is the best, no-nonsense, solution for unrivalled productivity, performance and value that will exceed all of your analytical expectations.

### FTIR BENCHTOP SYSTEMS



#### **Spectrometer FTIR Cary 630**

Versatile, innovative, and intuitive- providing superior quantitative and qualitative information for routine analyses.

### FTIR COMPACT & PORTABLE SYSTEMS



#### **FTIR Handheld 4300**

The 4300 Handheld FTIR is the first of its kind employing lightweight ergonomics, ease of use.



#### **4500 Series Portable FTIR**

This instrument is a good match for applications requiring fast, high-quality answers.



#### **5500 Series Compact FTIR**

Designed as an at-side FTIR analyzer to provide you with great results, rapidly and reliably, day after day.



#### **UV-Vis Cary 3500**

The innovative Cary 3500 UV-Vis will streamline your experimental design and amplify confidence in your results



#### **Spectrophotometer UV-Vis Cary 60**

The Cary 60 UV-Vis Spectrophotometer is efficient, accurate and flexible, and is designed to meet your immediate needs.



#### **Universal Measurement Spectrophotometer (UMS) Cary 7000**

Cary 7000 Universal Measurement Spectrophotometer (UMS) will satisfy all your solid sampling needs.



#### **UV-Vis Cary 4000**

The Cary 4000 UV-visible spectrophotometer provides excellent photometric performance in the 175-900 nm range



#### **UV-Vis Cary 5000**

The Cary 5000 UV-Vis-NIR spectrophotometer provides superb photometric accuracy and resolution in the 175-3300 nm range



#### **UV-Vis Cary 6000i**

The Cary 6000i UV-Visible-NIR spectrophotometer provides superb photometric accuracy and resolution in the 175-1800 nm range

## AVIATION SECURITY



### **Cobalt Insight100 Series**

Liquid explosive detection system. The latest member of the Insight range is Insight200M.



### **Cobalt Insight200M - The Bottle Screener for Liquid, Aerosols & Gels**

The Insight200M bottle screener is the latest liquid explosive detection system

## PHARMACEUTICAL ANALYSIS



### **RapID Raw Material ID Verification System**

The RapID Raman system is the next generation in raw material testing, a crucial component of pharmaceutical quality control at GMP facilities.



### **TRS100 Quantitative Pharmaceutical Analysis System**

Quantitative analysis for content uniformity & polymorph screening in pharmaceutical. Enables fast, easy to use.

## PHARMACEUTICAL ANALYSIS



### **Vaya Raman Raw Material Identity Verification System**

Handheld Raman spectrometer for raw material ID verification in pharmaceutical.

## HANDHELD CHEMICAL IDENTIFICATION



### **Resolve Handheld Through-Barrier Identification System**

Handheld Raman identification of explosives, narcotics, hazardous material incident response.



#### **LDIR Chemical Imaging System 8700**

Bringing Clarity and Unprecedented Speed to Chemical Imaging

#### LDIR ACCESSORY



#### **Agilent Sample Planer**

Flat Surface Sample Preparation made simple

### AA SUPPLIES



#### Hollow Cathode Lamps

Agilent provide a wide range of lamps regardless of make, model or manufacture. Background Correction Lamps, Coded Multi-Element Lamps, Coded Single Element Lamps, High Intensity UltrAA Coded Multi-Element Lamps, High Intensity UltrAA Coded Single Element Lamps, Hollow Cathode Lamps for PerkinElmer, Uncoded Multi-Element Lamps, Uncoded Single Element Lamps.



#### AA Standards

Agilent offers a comprehensive range of single and multi-element standards, ionization buffers and environmental standards for Atomic Spectroscopy. With the assurance of NIST traceability, Agilent's selection of standard mixes offers accurate, reliable calibrations at great value.

### MP-AES SUPPLIES



#### Nebulizers

Agilent 4100/4200 Series MP-AES instruments are compatible with a range of Agilent accessories and supplies designed to extend the instruments capabilities, including the Agilent OneNeb Series 2 nebulizer. The OneNeb Series 2 nebulizer offers superior performance with MP-AES instruments.



#### Torches

The Agilent 4200 MP-AES features a plug and play torch, optimized for high precision and sensitivity with the recommended power and gas flow settings. The torch features a unique polymer base that fits easily into the simple and effective torch-loader mechanism.



#### MP-AES Spray Chambers

The Agilent 4100/4200 Microwave Plasma-Atomic Emission Spectrometer runs entirely on air, which means your lab can eliminate flammable and expensive gases. It's safer and more cost efficient than other spectrometers. The 4100/4200 MP-AES enables superior detection and can perform unattended multi-element analyses.



#### Nebulizers

Agilent ICP-OES series instruments are compatible with a range of accessories and supplies designed to extend their capabilities, including the Agilent OneNeb Series 2 nebulizer.



#### Torches

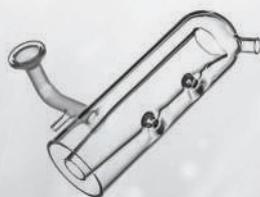
Agilent's ICP-OES series are compatible with a range of accessories and supplies designed to extend the capabilities of the instruments. Agilent axial fully demountable torches for ICP-OES instruments light easily and stay lit, reducing downtime.



#### ICP-OES Standards (single element)

Agilent offers a comprehensive range of single and multi-element standards, ionization buffers and environmental standards for Atomic Spectroscopy. With the assurance of NIST traceability, Agilent's selection of standard mixes offers accurate, reliable calibrations at great value.

### ICP-MS SUPPLIES



#### Spray Chambers

Agilent manufactures a range of high quality spray chambers and associated accessories for use with our market-leading portfolio of ICP-MS systems. Two spray chamber models are available, both of which can be effectively utilised with our full range of nebulizers. The two models are manufactured of Quartz and Polypropylene (with sapphire tube) respectively, and both should be replaced when memory effects remain after cleaning.



#### Torches

Comprised of three Concentric Quartz tubes through which streams of argon gas pass. Three streams = plasma, auxiliary, and nebulizer (carrier) gas. The Quartz torch is not suitable for samples containing hydrofluoric acid. It must be completely dried before installing and igniting the plasma. The torch should be replaced if chipped, cracked or distorted.



#### Interface Cones for 7700/7800/7900 and 8800/8900

The influence of good quality plasma/vacuum interface design on the overall performance and sensitivity of an ICP-MS system is vitally important and high quality interface cones are key elements.



#### Fluorescence Standards and Reference Materials

Agilent's fluorescence spectrophotometers are augmented by a wide range of accessories and supplies including fluorescence standards and reference materials.



#### Microplates

96-well Microplates and 384-well Microplates. Our microplates are available in white for best overall well-to-well reproducibility, or black for the lowest background signal levels. Both types have high binding surfaces that bind medium and large biomolecules (greater than 10 kDa) that have hydrophobic and/or ionic groups. These microplates are recommended for the Cary Eclipse Microplate Reader Accessory.

### FTIR SUPPLIES



#### Cary Series FTIR Instrument Supplies and Sources

Our range of consumables for the Agilent Cary Series FTIR instruments includes desiccant cartridges, replacement windows and assemblies, filters, and sources.



#### Cary 630 FTIR System Supplies

Agilent is proud to offer a variety of supplies and replacement parts for the Cary 630 FTIR: window, desiccant cartridges, ATR tips, and more.



#### FTIR Standards

Included in are NIST traceable polystyrene test film and spectroscopic grade KBr powder.



#### Cuvettes and Flow Cells

Cylindrical Cells, Disposable Cells, Flow-through Cells, Macro Cells, Rectangular Cells, Semi-micro Cells and Ultra-micro Cells.



#### 8453 UV-Vis Supplies

8-Position Multicell Transport, 8453 Source Lamps, Autosampler, Cell Holders, Dissolution Testing, Peltier Temperature Controller, Sipper, Spacers and Accessories and Tubing and Fittings



#### Cary UV-Vis Supplies

Cary 50 Cells, Cary Cell Holders and Bases, Cary Source Lamps, Cary Tubing, Fiber Optic Probes, Magnetic Stir Bars, Optical Filters, Polarizer and Depolarizer and Probe Accessories.

#### Standards

##### UV-Vis Certified Calibration Standards

Agilent chemical standards and accessory kits provide an inexpensive and time-saving solution for OQ/PV. The kits are designed for analysts who need to conform closely to both quality and regulatory requirements when performing UV-visible measurements.



##### UV-Vis Installation and Checkout Solutions

UV-Vis Installation and Checkout Solutions for Cary Eclipse Fluorescence



#### **Dissolution Sampling Station 850-DS**

The 850-DS Dissolution Sampling Station offers the latest capabilities for centralizing laboratory workflow of sample transfer, filtration and collection.

### AUTOMATED SYSTEMS



#### **Cary 60 Multicell UV Dissolution System**

Provides a fully integrated, automated dissolution testing system using UV



#### **Cary 60 Fiber Optic UV Dissolution System**

Offers versatility and flexibility while delivering the highest level of quality provides excellent optical transmission and reproducibility capabilities



#### **Dissolution Apparatus 708-DS**

The 708-DS is designed for reproducibility and ease of qualification, and is the ideal platform for standardizing dissolution testing.



#### **BIO-DIS Reciprocating Cylinder Apparatus**

The Agilent BIO-DIS Reciprocating Cylinder Apparatus is ideal for automatic dissolution testing of dosage forms that require different types of media.



#### **Reciprocating Holder Apparatus 7**

The Reciprocating Holder Apparatus 7 is ideal for automatic dissolution testing of dosage forms requiring a change of media, smaller volume or more vigorous agitation.



#### **Apparatus 7 400-DS**

The Agilent 400-DS Dissolution Apparatus 7 sets the performance standard standard for small-volume drug-release testing of medical devices such as drug eluting stents (DES).



#### 280-DS Mechanical Qualification System

The Agilent 280-DS Mechanical Qualification System (MQS) revolutionizes dissolution qualification by measuring critical physical parameters of dissolution apparatus with unmatched unprecedented precision. Using Instrument and Vessel Modules and powered by the intuitive Agilent 280-DS Workstation Software, the 280-DS provides accurate, qualitative measurements by eliminating the guesswork of interpreting values obtained with individual manual gauges.

## ACCESSORIES



#### Dissolution Paddles, Baskets and Shafts

For Apparatus 1 (baskets) and Apparatus 2 (paddles) dissolution testing, Agilent's variety of quality accessories can support your laboratory's needs while maintaining compliance with regulatory standards. In keeping with the most current guidance for mechanical qualification, Agilent also offers Verified Dissolution Accessories including baskets, paddles and basket shafts with certificates of conformity (CoCs) with actual component measurements for all critical dimensions using traceable devices.



#### Dissolution Vessels

Agilent provides a variety of dissolution vessels for use with Agilent dissolution apparatus, as well as other equipment manufacturers.

- TruAlign Vessels for the 708-DS and 709-DS
- TruCenter Vessels for the discontinued 7025 and 7030 Dissolution Apparatus.
- EaseAlign Vessels for the discontinued 705-DS, 7000 and 7010 dissolution apparatus
- Molded Vessels are vacuum formed (VF) and offer the tightest precision available to reduce position-to-position variability and improve uniformity.



#### Filters

Ensure the integrity of your dissolution sample with the original Full Flow Filter design. These filters offer increased surface area to optimize filter life and prevent clogging when taking dissolution samples. These are made of a low protein-binding material that can filter a wide variety of active drug substances.

### FILTRATION



#### Captiva EMR-Lipid

Captiva EMR Lipid provides highly selective, efficient lipid/matrix removal without analyte loss. The novel EMR Lipid technology removes lipids based on size exclusion and hydrophobic interaction. Effective lipid removal ensures minimal ion suppression of target analytes, significantly improving method reliability and ruggedness.



#### Captiva Filter Plates & Cartridges

Captiva filtration plates and cartridges completely remove precipitated proteins and strongly protect against HPLC column clogging. Captiva 96-well filter plates, available in 0.2 and 0.45  $\mu\text{m}$  pore sizes, are ideal for preparing precipitated protein samples for LC/MS. Captiva 10 and 20  $\mu\text{m}$  glass fiber filter plates are perfect for automated systems and for clarifying particle-laden samples.



#### Captiva Syringe Filters/Econofilters Syringe Filter

Sample filtration is critical to achieving optimal system performance. Agilent Captiva Premium Syringe Filters make the process faster than ever with the industry's highest flow rates and loading capacities. In addition, Agilent sets the standard for LC/MS testing and certifying more syringe filters to be completely free of observed extractables than any other manufacturer. All Agilent Captiva Premium Syringe Filters are supplied with a HPLC or LC/MS Certificate. Choose from a variety of membrane types and pore sizes to suit your needs.

### QUENCHERS KITS & STANDARDS



#### Bond Elut EMR-Lipid

Bond Elut Enhanced Matrix Removal Lipid provides the most comprehensive matrix removal of any sample preparation product. Lipids can be extracted selectively from high-fat samples without analyte loss. The final polishing step removes excess water and improves analyte partitioning.



#### Dispersive Kits

QuEChERS dispersive kits supplied in 2 or 15 mL centrifuge tubes accommodate the aliquot volumes specified by current AOAC and EN methodologies. Select the dispersive kit suited to the type of food analyzed and the method followed. The sorbent extracts the sample matrix, while  $\text{MgSO}_4$  helps remove excess water and improve analyte partitioning.

## SAMPLE PREPARATION METHODS

### QUENCHERS KITS & STANDARDS



#### Extraction Kits

QuEChERS salts and buffers are prepackaged in anhydrous packages. This allows you to add them to the sample after the solvent, based on your method of analysis (AOAC or EN). Extraction kits include: 50 polypropylene centrifuge tubes (50 mL) with caps, MgSO<sub>4</sub>, NaCl, or other salts for buffering.



#### Standards for QuEChERS Products

In addition to our QuEChERS Kits, Agilent makes your analysis easier by providing standards for the most commonly used regulatory methods, including AOAC and EN.

## SOLID PHASE EXTRACTION (SPE)



#### Bond Elut Plexa

We offer a wide range of solid phase extraction (SPE) products in various polarities and chemistries. A broad selection of Bond Elut sorbents is available in cartridge and well plate formats and as bulk sorbents. Frits, adapter caps, empty cartridges for custom packing.



#### **OpenLab CDS**

Our newest generation CDS combines chromatography and mass spectrometry into one single data system.



#### **OpenLab CDS ChemStation Edition**

Offers the most complete instrument control of Agilent LC, GC, CE, CE/MS, and LC/MS instruments systems you have now, with limited instrument control of other vendors' systems.



#### **OpenLab CDS EZChrom Edition**

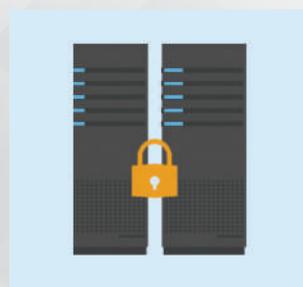
Provides the most complete control of other vendors' instruments, plus full control of Agilent LC and GC instruments.

## DATA MANAGEMENT



#### **OpenLab ECM**

Manage all the data your lab produces, from any technology or vendor—even across multiple sites.



#### **OpenLab ECM XT**

Use this cost-effective system to archive analytical data and capture electronic reports and files.

## LAB WORKFLOW MANAGEMENT



#### **SLIMS**

All-in-one digital platform designed to manage all the information in your lab.



#### MassHunter Software

The all new Agilent MassHunter Workstation software provides intuitive, yet powerful, instrument control, data acquisition, qualitative and quantitative data analysis,



#### MassHunter Software with MSD ChemStation DA

Updated version of your familiar GC/MSD software – with the option to have either MSD Productivity ChemStation mode for easy, rapid deployment into an existing GC/MSD lab.

## MASSHUNTER FOR LIFE SCIENCE RESEARCH



#### Life Science Research

- MassHunter Software
- Mass Profiler Professional Software
- Profinder Software



#### Life Science Research

- METLIN Metabolomics Database and Library
- Spectrum Mill
- VistaFlux Software

## MASSHUNTER FOR PHARMA



#### Software for Pharma

- MassHunter Software
- Analytical Studio Reviewer
- BioConfirm Software



#### Software for Pharma

- Profinder Software
- Spectrum Mill
- WalkUp Software



#### **MassHunter Software**

MassHunter Workstation software provides intuitive, instrument control, data acquisition, and data analysis



#### **Mass Profiler Software**

Mass Profiler is specifically designed for expression profiling applications such as biomarker discovery.

#### MASSHUNTER FOR FOOD AGRICULTURE AND ENVIRONMENTAL



#### **MassHunter Software**

MassHunter Workstation software provides intuitive, instrument control, data acquisition, and data analysis.



#### **Mass Profiler Professional Software**

MPP is the only chemometrics software package designed to exploit the high information content of MS data and can be used in any MS-based differential analysis.



#### **Mass Profiler Software**

Mass Profiler is specifically designed for expression profiling applications such as biomarker discovery.



#### **MassHunter Software**

MassHunter Workstation software provides intuitive, instrument control, data acquisition, and data analysis.



#### **Mass Profiler Software**

Mass Profiler is specifically designed for expression profiling applications such as biomarker discovery.

#### ICP-MS MassHunter Software



ICP-MS MassHunter Workstation software controls all aspects of the setup and operation of your Agilent ICP-MS and ICP-QQQ instruments and accessories.

#### ICP-MS Intelligent Sequencing Software



Customize to meet your QA/QC functionality needs. Automate QA/QC checks.

#### ICP-MS Plasma Chromatographic Software



Developed by Agilent, this optional software handles chromatographic data with powerful integration, calibration and quantification capabilities.

#### ICP Expert Software for ICP-OES



Powerful ICP Expert Software for the 5110 ICP-OES and 5100 ICP-OES features a familiar worksheet interface, easy method development.

#### MP Expert Software for MP-AES



With a familiar worksheet interface, automated method development, and software applets that include pre-set method templates, the Agilent MP Expert dramatically simplifies analysis.

#### SpectrAA Software



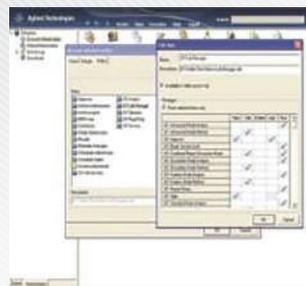
The SpectrAA Worksheet software features an innovative spreadsheet-design format that displays sample.

### MOLECULAR SPECTROSCOPY DATA SYSTEMS



#### IR Software

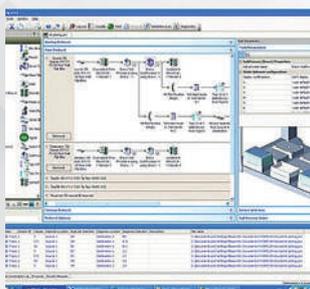
- Agilent Clarity Software
- FTIR Libraries for 4100/4200
- MicroLab Expert
- MicroLab FTIR Software
- MicroLab Mobile Software
- Resolutions Pro FTIR Software



#### UV-Vis & UV-Vis-NIR Software

- Cary UV Workstation software
- Cary Eclipse Software
- Cary WinUV Software
- UV-Vis ChemStation Software

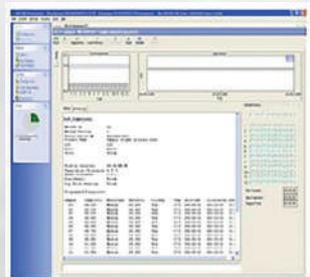
### AUTOMATION SOLUTIONS



#### VWorks Automation Control Software

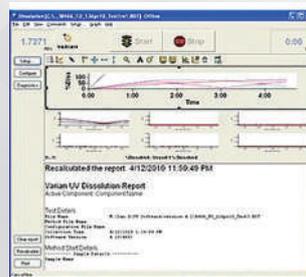
Agilent VWorks Automation Control software is a complete solution for driving the integration of laboratory automation throughout the discovery process.

### DISSOLUTION SYSTEMS



#### Dissolution Workstation Software

Dissolution Workstation Software integrates control of dissolution apparatus and automated sampling.



#### UV Dissolution Software

Cary WinUV Dissolution Software supports both Agilent's Multicell and Fiber Optic Online UV Dissolution Systems.

### GPC/SEC DATA SYSTEMS



#### GPC/SEC Data Systems

- GPC/SEC Software
- Cirrus GPC Software
- Bio-SEC Software
- GPC/SEC Software for OpenLAB CDS



### Density Meter DMA™ 4002/5002/6002

Inspired by over 55 years of expertise in benchtop density measurement, the DMA 4002, DMA 5002, and DMA 6002 modular benchtop density meters combine automated functions with unmatched precision and reliability. As the fastest, most modular benchtop density meters in Anton Paar's portfolio, they deliver four-digit results in just 20 seconds – powered by U-Pulse technology based on the patented Pulsed Excitation Method for best-in-class accuracy.



### Density Meter: DMA™ 502/ 1002

The compact density meters DMA 502 and DMA 1002 are ideal for applications ranging from beverages to chemicals. With 140 conversion tables, 400 methods, and 5,000 memory slots, both models streamline workflows while requiring only 1 mL of sample. Flexible filling options – such as syringe filling, the Xsample 200, and the filling funnel.



### Density Meter DMA™ 35 Portable

The DMA™ 35 portable density meter measures the density and concentration of your sample and is characterized by the highest level of user-friendliness. It employs the oscillating U-tube principle from Anton Paar. This means: 50 years of density measurement experience in one small instrument.



### Density Meter DMA™ 4200 M

The new DMA 4200 M is a density meter for exceptional conditions. It measures the density at temperatures between -10 °C and 200 °C and elevated pressures up to 500 bar. The Pulsed Excitation Method used by DMA 4200 M delivers the most stable density results based on comprehensive knowledge of the oscillation characteristics. The new automatic bubble detection, FillingCheck™, makes the DMA 4200 M compliant with ASTM D4052 and ASTM D5002.



### Density Meter DSA™ 5000 M

DSA 5000 M is the only instrument that combines density and sound velocity measurements in one setup. It determines the concentration of two- and three-component solutions using the most accurate density results in the market, measured with the Pulsed Excitation Method. R&D departments in many different industries already make use of the opportunity to measure both parameters in one go.



### Density Meter Soft Drink Analyzer M

The new Soft Drink Analyzer M sugar concentration meter is the only instrument available to determine the sugar inversion process digitally. It measures density with the patented Pulsed Excitation Method and sound velocity – and is the ideal instrument for measuring sugar content in carbonated soft drinks, syrups, and HFCS. Soft Drink Analyzer M delivers the most accurate results you can get for both parameters.

## POLARIMETER



### **Modular Compact Polarimeter MCP 100/150**

The powerful MCP polarimeter series from Anton Paar precisely, quickly, and easily determines the optical rotation of chiral substances. Based on a modular concept, the user-friendly MCP polarimeters are open to customer-specific configuration and are easily extended with a variety of sample cells and wavelength options in order to ideally suit your requirements.



### **Modular Circular Polarimeter MCP 5100/5300/5500**

The high-end MCP polarimeter series combines state-of-the-art technology, modern design, and great usability. Customer-specific configurations like multiple wavelengths provide the widest range of options to keep your polarimeter fit for the future. MCP 5100/5300/5500 is the perfect solution for measuring the optical rotation and determining the concentration or specific rotation of optically active substances for the pharmaceutical, cosmetic, and chemical industries, as well as for R&D.

## REFRACTOMETER



### **Compact Refractometers Abbemat 3X00**

Reliability, precision and convenience: Abbemat 3X00 refractometers offer you an exceptional combination of technical expertise and user-friendly operation for your refractive index and concentration measurements. The premium technology and compactness of the Abbemat 3X00 transform time-consuming measurements into highly efficient quality control.



### **Digital heavy duty Refractometer Abbemat 450/650**

The Abbemat 450/650 refractometers are extremely robust and waterproof (IP68). To measure samples containing solid particles or air bubbles you can position the Heavy Duty Abbemat on its side to prevent that sedimentation and disturbances affect the results. A separate control unit allows for convenient operation from a remote position.



### **Brix Refractometer Abbemat Juice Station**

Reliable Brix measurements even with fruit pulp or other particles in your beverage. The vertical setup of the Abbemat Juice Station refractometer avoids sedimentation of particles, e.g. pulp in fruit juices, on the measuring prism. The attached filling funnel allows fast and easy serial analyses, e.g. in quality control. The next sample flushes out the previous one, so that you do not need to clean the measuring prism between samples. An internal temperature control assures the correct measuring temperature.

## REFRACTOMETER



### **Multiwavelengths Refractometer Abbemat MW**

The Abbemat MW digital refractometer enables quick and fully automatic measurements of the refractive index at different measuring wavelengths, e. g. for dispersion and Abbe number determination. For these measurements Abbemat MW can be equipped with up to 8 different wavelengths in the range of 435 nm to 656 nm. This makes the Abbemat MW digital refractometer a versatile instrument for investigations into liquids, polymer bonds and glasses.



### **Digital Performance Refractometer Abbemat 300/500/350PP/550PP**

Abbemat refractometers allow fast and non-destructive refractive index and concentration measurements. All instruments of the Performance and Performance Plus lines provide full compliance with 21 CFR Part 11, including user levels, audit trail, and forgery-proof data export. The Abbemat T-Check feature precisely calibrates and adjusts the surface temperature of the measuring prism of all Anton Paar refractometers.

## MICROWAVE DIGESTION



### **Microwave Digestion System: Multiwave GO Plus**

The Multiwave GO Plus microwave digester combines the advantages of single-mode and multi-mode microwave digestion systems in the patented Directed Multimode Cavity (DMC). Up to 12 samples can be digested simultaneously. Optimized heating and cooling ensures fast digestions, but also a high throughput, even with a smaller number of vessels. Single-Vessel Mode enables optimal method optimization and can be used for low-throughput applications.



### **Microwave Digestion/Extraction: Multiwave 5000**

Multiwave 5000 is a microwave reaction system for the digestion of samples (varying in difficulty or volume), evaporation, acid leaching, and extractions. Thanks to the flexible platform concept you can configure Multiwave 5000 to be the best fit for your applications.



### **Microwave Digestion System: Multiwave 7101/7301/7501**

When 50 years of experience in sample preparation meet advanced microwave technology, a high-performance microwave digestion system is the outcome. The Multiwave 7101/7301/7501 series delivers next-level performance, working at up to 300 °C and up to 199 bar. This ensures complete digestions of all kinds of samples, such as food, environmental, polymer, cosmetic, pharmaceutical, geological, chemical, and petrochemical samples, even in the same run.



### Hot block digestion system Multicube 48

Multicube 48 is a robust laboratory hot block for acid digestion, evaporation, and concentration of samples. The outstanding design enables high temperature homogeneity of  $\pm 1^\circ\text{C}$  over the whole block to ensure the same digestion quality for all samples. Use the Multicube 48 vials for weighing and digesting, storing digested solutions, and as volumetric flasks to fill samples to the appropriate volume before inserting them in autosamplers for metal analysis by F-AAS, GF-AAS, ICP-OES, or ICP-MS.

## MICROWAVE SYNTHESIS & SYNTHETIC CHEMISTRY



### Monowave 400 R

Combine Monowave 400 R with the Cora 5001 Raman spectrometer to receive a spectrum of information out of a former black box. Anton Paar combines two powerful techniques for synthetic chemistry – the microwave reactor Monowave 400 R delivers high-speed chemical reactions and the Raman analyzer Cora 5001 adds molecular spectroscopy for their characterization.



### Monowave 400/200 and 450 Microwave-Assisted Extraction

Monowave 400 and Monowave 200 are high performance microwave reactors specially designed for small scale microwave synthesis applications in research and development laboratories. Monowave 450 is a modern microwave reactor specially designed for microwave-assisted extractions in analytical laboratories.

## PARTICLE CHARACTERIZATION



### Laser Diffraction Particle Size Analyzer: Litesizer DIF 100/300/500

The Litesizer DIF series offers advanced particle sizing from 10 nm to 3.5 mm, drawing on nearly 60 years of laser diffraction expertise. This laser diffraction particle size analyzer has a best-in-class optical setup featuring powerful 10 mW and 25 mW lasers and the widest range on the market of detected diffraction angles from  $0.01^\circ$  to  $170^\circ$ .



### Dynamic Light Scattering Instrument: Litesizer DLS 100/501/701

Litesizer DLS delivers best-in-class particle sizing with automatic angle selection to prevent errors, while MAPS technology yields the highest-possible peak resolution. Continuous transmittance monitoring detects sedimentation and agglomeration during measurement, enhancing measurement reliability.

## PARTICLE CHARACTERIZATION



### **Dynamic Image Analyzer: Litesizer DIA 100/500/700**

With Litesizer DIA Series, our dynamic image analyzer, you can easily and reliably characterize the size and shape of particles via analysis of their direct images. In just one step, quickly switch among three modules that use dispersion liquid, compressed air or free-fall for excellent dispersion of your sample.

## RHEOMETER



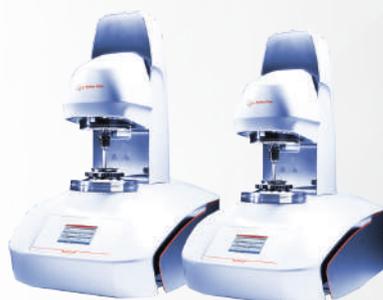
### **Rheometer: MCR 102e/302e/502e**

The MCR rheometer series is the result of continuous development and based on decades of experience in rheology and rheometry. The combination of innovative and thousandfold field-proven technology with the robust design represents the benchmark in its class.



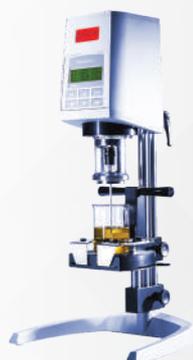
### **Rheometer: MCR 702e MultiDrive**

The two high-end models of the new MCR Evolution series, MCR 702e MultiDrive and MCR 702e Space MultiDrive, are the most versatile rheometers available. Alongside all standard rheological test modes they can be equipped with an additional lower drive unit. This means that you can perform rheological tests with two torque transducers and drive units at once – opening up multiple possibilities for your research. There are no limitations regarding the used test modes, measuring systems, accessories, and temperature devices, and no limitations on measurement precision.



### **Rheometer: MCR 72 and MCR 92**

The two new members of the renowned Modular Compact Rheometer (MCR) series – MCR 72 and MCR 92 – are the two wisest choices for quick and easy rheological measurements. These real rheometer “pearls” from Anton Paar are streamlined for your daily lab routine, easy to use in a Plug and Play fashion and available at an accommodating price.



### **Rotational Rheometer: RheolabQC**

RheolabQC is a rotational rheometer based on state-of-the-art technologies also used in R&D rheometers. It combines unrivaled performance with easy operation and robust design. From quick single-point checks over flow curve and yield point determinations to complex rheological investigations: RheolabQC sets new standards for carrying out routine rheological tests. This powerful rheometer is an excellent example of a modern measuring instrument utilizing all available technical possibilities to ensure flexible, reliable and simple operation.

## VISCOMETER

---



### **SVM™ Series 2001/3001/4001**

The SVM™ series gives you more parameters than any other kinematic viscometer on the market. There are three different models: SVM™ 2001 is a quick and easy-to-use viscometer for measuring kinematic viscosity at any temperature between 15 °C and 100 °C, whereas SVM™ 3001 provides measurements between -60 °C and +135 °C. SVM™ 4001 is designed to determine viscosity and density simultaneously at any two temperatures between 15 °C and 100

---



### **Rotational Viscometer ViscoQC™ 100**

ViscoQC™ 100 is Anton Paar's brand new entry-level digital rotational viscometer that measures the dynamic viscosity as a single-point value. Unbeatable ease of use makes ViscoQC™ the new standard for traceable viscosity checks. Unique features include automatic spindle detection by Toolmaster™, automatic guard detection, magnetic spindle coupling for easy one-hand exchange of spindles, a special Auto Mode, and many more – See for yourself!

---



### **Rotational Viscometer ViscoQC 300**

Developed for a wide range of applications, ViscoQC 300 ensures the quality of your substance – from almost any fluid to semi-solid samples – by delivering fully traceable viscosity results right at your fingertip. Starting from a multi-point viscosity measurement for your respective purpose, your system is upgradeable with compliance (21 CFR Part 11) and/or additional analysis software to also meet your future needs. Further improve your process with the optional sample bar code scanner and data processing via LIMS Bridge software.

---



### Raman Spectrometers Cora 5001 Fiber/Direct

Cora 5001 is a Raman analyzer for the quick and reliable identification of substances based on their unique chemical fingerprint. Choose the Fiber model for flexible analysis outside the instrument via a probe or the Direct model which analyzes samples in a closed compartment and has a laser Class 1 for the safest use. The guided analysis procedure means Cora 5001 is suitable for operation by personnel with minimum training. The small footprint and battery option make these benchtop Raman instruments versatile tools for analytical tasks in-house or in the field.



### Handheld Raman Spectrometer Cora 100

Cora 100 is a small Raman analyzer which fits in your hand. It is ideal for point-and-shoot measurements to identify substances at the touch of a button. You can simply identify unknown samples such as hazardous materials, narcotics, explosives, and chemical warfare agents or verify incoming goods without being a trained chemist. The easy-to-use software and accessories enable you to assess the risks involved with substances in order to make life-saving decisions on the spot or in hot-zone environments.



### Monowave 400 R

Combine Monowave 400 R with the Cora 5001 Raman spectrometer to receive a spectrum of information out of a former black box. Anton Paar combines two powerful techniques for synthetic chemistry – the microwave reactor Monowave 400 R delivers high-speed chemical reactions and the Raman analyzer Cora 5001 adds molecular spectroscopy for their characterization.

## ATOMIC FORCE MICROSCOPE (AFM)



### Tosca™ 200/400

Top-level AFM for entry-level budgets: with the fastest measurement setup and largest sample stage, the Tosca series will keep up with your AFM nano surface analysis.

Tosca is the first choice for researchers, pioneers, thinkers, and creators in nanotechnology material science. Mode switching with head exchange was yesterday: Tosca atomic forces microscopes enables measurement on the exact same spot using all available modes combined in one head.



### **FTIR Wine Analyzer: Lyza 5000 Wine**

The novel multi-parameter FTIR analyzer Lyza 5000 Wine is your solution for the analysis of wine. Fast measurements for a multitude of parameters ensure you have all the information you need. Thanks to a quick setup and pre-installed models all important results for wine analysis, including ethanol, sugars, and acid profile are just a tap away. Lyza 5000 Wine can be used as a stand-alone device, automated for high throughput, or connected to your benchmark instruments – Anton Paar density meters and Alcozyzer – for the most powerful wine analysis.



### **FTIR Spectrometer: Lyza 7000/3000**

The Lyza series FTIR spectrometers transform industry standards: Guided workflows, combining measurement, processing and spectral analysis in an automated method, allow users with minimal experience to perform QC measurements in just three steps, for a quick pass/fail result. Measure hundreds of sample types – from solid to liquid or gaseous – and switch effortlessly between measurement cells, thanks to the versatile modular cell concept. Premium optical components ensure consistently high performance and longevity for years to come.

## FLASH POINT



### **Abel Flash Point Tester: ABA 300/500**

Anton Paar's Abel closed-cup flash point tester series – ABA 500 and ABA 300 – offers next-generation flash point testing. Easily determine the flash point according to ISO 13736, ISO 1516, ISO 1523, and more. Perform automatic, high-precision flash point testing of samples like jet fuels, solvents, flavors and fragrances, and chemicals. Innovative cooling options permit flash point testing across a temperature range from -35 °C to +130 °C.



### **Tag Flash Point Tester: TAG 300/500**

TAG 500 and TAG 300: Our next-generation closed-cup TAG flash point tester series. Guided flash point measurements (acc. to ASTM D56, ASTM D3941, ASTM D3934, ISO 1516, ISO 1523, etc). For jet fuels, solvents, flavors and fragrances, chemicals, and other flammable liquids. Automatic. High-precision. -35 °C to +130 °C sample temperature range. Components with the longest lifetime on the market.



### **Pensky-Martens Flash Point Tester: PMA 500**

PMA 500 is a Pensky-Martens closed-cup flash point tester for determining the flash point according to ASTM D93, EN ISO 2719, and IP 34. It is the first-class solution for automatic high-precision flash point testing in the petroleum, chemical, and fragrance industries, and for test laboratories. The device ensures maximum safety and provides high sample throughput.



### **Cold Filter Plugging Point Tester: Callisto 100**

The fully automated, compact, stand-alone CFPP tester Callisto 100 determines the low-temperature operability in diesel fuel, biodiesel, diesel blends and gas oils. Callisto 100 comes with a newly developed state-of-the-art Peltier element concept which allows the connection of a methanol-free cooling system. It ensures outstanding homogeneity of the cooling jacket, which is the most critical and decisive parameter for a correct CFPP value determination.

---

## HIGH-PRECISION THERMOMETERS

---



### **MKT 50 and MKT 10**

The high-precision thermometers from Anton Paar are designed for the most accurate temperature measurements, comparison calibrations and fixed point calibrations in industry, laboratories and research. Combined with calibrated platinum resistance thermometers, Anton Paar's thermometers achieve a measuring uncertainty of 10 mK or less.

---

## DISTILLATION

---



### **Atmospheric Distillation Analyzer: Diana 300/700**

Anton Paar's Diana distillation analyzer series – Diana 700 and Diana 300 – automatically conducts high-precision distillation range analysis at atmospheric pressure. Beyond characterizing petrochemical product samples, Diana 700 is able to distill aromatic hydrocarbons and other volatile organic liquids. The Diana series is easy to use, highly efficient, and safe to operate.

---



### **CO<sub>2</sub> Meter: CarboQC**

CarboQC is the precise CO<sub>2</sub> meter which allows reliable QC on finished packages as well as highly accurate measurements in the laboratory for product development. It gives you fast, accurate and reliable determination of dissolved carbon dioxide in beverages.



### **Combined CO<sub>2</sub> and O<sub>2</sub> Meter: CboxQC™**

CboxQC™ is the precise combined CO<sub>2</sub> and O<sub>2</sub> meter which allows reliable QC on finished packages as well as highly accurate measurements in the laboratory for product development. It gives you fast, accurate, and reliable determination of dissolved carbon dioxide and oxygen in beverages. When combined with Anton Paar's PFD filling device, sample is taken directly from the package into the measuring chamber of CboxQC™ – with no loss of dissolved carbon dioxide and dissolved oxygen during sample transfer. CboxQC™ for the laboratory provides reliable CO<sub>2</sub> and O<sub>2</sub> results, even out of very small packages.

## AUTOMATED MULTIPURPOSE POWDER X-RAY DIFFRACTOMETER

### XRDYNAMIC 500



XRDynamic 500 drives unbeatable XRD data quality with maximum efficiency. Enjoy the benefits of a versatile platform covering a wide variety of applications with optimal solutions for powder XRD, non-ambient XRD, PDF analysis, SAXS, and more. Intuitive to use, with fully automated optics and alignment routines, it allows everyone, from novices to experts, to collect top-quality XRD data quickly while minimizing errors. XRDynamic 500: Driving XRD.

## COATING THICKNESS MEASUREMENT

### CALOTEST SERIES



The Calotest series is designed to quickly characterize coating thicknesses between 0.1  $\mu\text{m}$  and 50  $\mu\text{m}$  on a wide range of materials. The simple ball-cratering method used offers a fast and accurate means of checking the thickness of any kind of coating, whether a single or multilayered stack. Typical examples include CVD, PVD, plasma spray coatings, anodic oxidation layers, chemical and galvanic deposits, polymers, paints, and lacquers. You can choose between three different models depending on your use case.



### **Micro Combi Tester MCT<sup>3</sup>**

The Micro Combi Tester (MCT<sup>3</sup>) is a universal measurement head for full mechanical characterization of coatings and bulk samples. The unique wide load range of this instrument allows the determination of adhesion, scratch resistance, hardness, elastic modulus, friction, and wear for a wide range of samples. It is applicable to organic and inorganic as well as soft and hard coatings (between 1  $\mu\text{m}$  and 20  $\mu\text{m}$ ), and also bulk materials.



### **Nano Scratch Tester NST<sup>3</sup>**

The NST<sup>3</sup> nano scratch tester is particularly suited for characterizing the practical scratch resistance and adhesion failure of thin films and coatings with a typical thickness below 1000 nm. NST<sup>3</sup> can be used to analyze organic and inorganic coatings as well as soft and hard coatings. The unique design of the nano-scratch measurement head includes two sensors for force and depth measurements associated with a state-of-the-art piezoelectric actuator. These unique features provide a fast response time (down to milliseconds), great accuracy, and great flexibility for all kinds of scratch measurements.



### **Revetest<sup>®</sup> Scratch Tester RST<sup>3</sup>**

The Revetest<sup>®</sup> scratch tester is the industrial standard widely used for characterizing hard-coated materials with a typical coating thickness exceeding 1  $\mu\text{m}$ . RST<sup>3</sup> is a reliable instrument for the characterization of both coating/substrate adhesion and surface anti-scratch resistance. Equipped with an easy-to-use software package, it is possible to perform scratch tests in a wide variety of testing modes, including simple scratch testing, advanced scratch testing (with pre-scan and post-scan), scratch map, scratch map by stage, user-defined scratch, etc. Anton Paar is the world leader in scratch testing with more than 1,500 Revetest<sup>®</sup> instruments sold.



#### **High Vacuum Physisorption Analyzer: Autosorb**

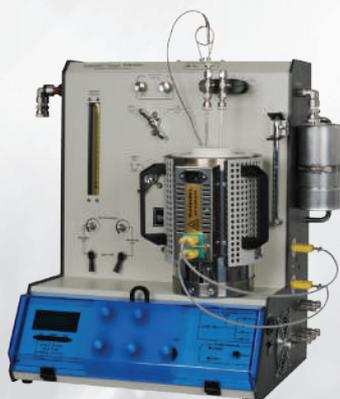
Autosorb instruments are high vacuum physisorption and chemisorption analyzers designed for advanced measurements of BET surface area, active area, and pore size distributions. Independent analysis stations, exclusive TruZone active coolant control, and accessible Kaomi software let you meet your current measurement needs, while factory and field upgradeable options let you adapt to future ones. For your most important gas sorption measurements, the choice is clear: Absolutely Autosorb.



#### **BET Surface Area Analyzer: Nova**

The Nova BET surface area analyzers have set a new benchmark in surface area and pore size analysis.

Up to eight degassing stations plus up to four analysis stations let you degas samples while analyzing others. Analyze four 5-point BETs in approximately 20 minutes, with 2 % reproducibility. Automated degassing means no operator intervention is necessary.



#### **Automated Flow Chemisorption Analyzer: ChemBET Pulsar**

ChemBET Pulsar combines affordability and automation in a compact benchtop catalyst characterization unit. Programmable analysis sequences combined with an automatic loop injector, gas switching, and furnace temperature ramping enable easy pulse titration and temperature-programmed analyses with minimal user intervention. An advanced data reduction package including peak deconvolution, comparable to high-end catalyst characterization units, comes as a standard.



#### **High-Pressure Volumetric Gas Sorption Analyzer: iSorb**

The iSorb HP gas sorption analyzers are perfect for evaluating materials in gas storage, gas separation, or emission control applications. With high-precision transducers, precise manifold temperature control, and a built-in library of advanced equations of state, the iSorb HP series gives you access to high-quality gas adsorption and kinetic data to a maximum of either 100 bar or 200 bar absolute. Optional temperature control accessories allow measurements over a temperature range of 75 K to 773 K.



#### **External Vacuum and Flow Degassing: FloVac**

Flow and vacuum degassing capability in a single instrument, featuring an easy-to-use temperature controller and adjustable gas flow valves: Degas six samples at a time while cooling six previously processed samples in the cooling chamber.



#### **Cryostat Accessory for autosorb iQ: CryoSync**

The CryoSync accessory for autosorb iQ analyzers allows users to generate precise  $<0.005$  K isothermal sorption measurements in a wide range of cryogenic temperatures (82 K to  $>115$  K) while using readily available liquid nitrogen as the cryogen. With this compact accessory you can perform advanced sorption measurements with ease, including argon isotherms at 87.3 K and multi-isotherm heat of adsorption measurements.

## SEMI-SOLID AND SOLID DENSITY ANALYZERS



#### **Tap Density Tester: Ultratap 500/500 Twin**

The Ultratap 500 series of tap density testers delivers unmatched durability with guaranteed 25 million taps and a three-year warranty for long-lasting reliability. Designed for full compliance with major industry standards, they offer 24 pre-stored methods. They are also 90 % quieter, offering the lowest noise levels on the market. With TruLock straps for quick cylinder setup, an intuitive touchscreen, and automated reporting of key parameters, our instruments ensure a seamless experience every time.



#### **Gas Pycnometer for Semi-Solid and Solid Density: Ultrapyc 3000/5000-Foam/Micro**

The Ultrapyc gas pycnometer measures the density of solids and semi-solids to track purity or porosity. With measurements taking less than 10 min, it's perfect for controlling the quality of your samples throughout the manufacturing process.

#### **Capillary Flow Porometers for Through-Pores PoroMeter 3G (micro/z/zH)**



Porometer 3G instruments deliver accurate and repeatable through-pore size measurements within 30 minutes for any sample. Their simplified operation and general measurement speed make these capillary flow porometers the clear choice for through-pore size distribution measurements of filtration media. Depending upon the pore size range and flow-through characteristics of your samples, there's a Porometer 3G that's right for you.

---



#### **Mercury Intrusion Pore Size Analyzers PoreMaster 33/33GT/60/60GT**

The PoreMaster series of mercury intrusion porosimeters minimizes the possibility of exposure to both liquid mercury and mercury vapor, ensuring maximum safety for operators. The numerous automated and ergonomically considered features provide you with a simple operation experience while determining the size distribution and volume of the macropores in your materials. Four distinct models are available to fit your specific measurement requirements.

---



### Brabender FarinoGraph

The Brabender FarinoGraph determines the water absorption of flour and rheological properties of dough. It addresses key national and international standards like ICC, AACCI, and ISO. It ensures confidence in grain, flour, and dough quality across the entire value chain with a universally recognized language: Brabender/Farinograph Units (BU/FU).



### Brabender TwinLab

Experience the future of lab extrusion with the Brabender Twin Screw Extruders – the TwinLab series – which provides various configurations to process everything from liquids to pellets. Streamline your material testing for lab and pilot-scale setups, and optimize your extrusion production process.



### Brabender ViscoQuick

The Brabender ViscoQuick is a compact and reliable digital torque viscometer that's 25 % faster than comparable devices. Its integrated PC, touchscreen and temperature control system (Peltier) optimize space and costs. Heating and cooling rates of +20 °C /-15 °C per minute ensure short measuring times (e.g., starch gelatinization below 10 minutes).



### Brabender AbsorptoMeter

The AbsorptoMeter is the market-leading instrument for testing oil absorption of carbon black, silica, and other chemicals, compliant with key ASTM standards. The automated, software-supported system replaces outdated manual methods for testing other powders, reducing errors and enhancing precision and repeatability.



### Brabender MT-CA

The MT-CA moisture analyzer, using automated oven drying, measures raw material moisture in a measuring range of >0.1 and up to 99.9 % moisture content. It reduces test times by 65 % and avoids weighing errors by eliminating the cooling step in the desiccator and automatic back-weighing after drying. It's the perfect choice for moisture determination of powders like flour, tobacco, and solid items with predefined methods that meet international standards.



### **Brabender Amylograph-E**

The Amylograph-E assesses starch properties and enzyme activity in flours according to ICC, ISO, and AACCI standards. Its gradual heating replicates baking conditions and captures the entire enzyme spectrum without starch damage. High-precision measurements are visually displayed in a diagram with multiple evaluation points. Real-time temperature measurements are devoid of fluctuations and guarantee precision throughout the process.

---



### **Brabender Aquatrac-V**

The Aquatrac-V moisture analyzer is the only instrument on the market that determines the water-selective, residual moisture in plastics in compliance with DIN EN ISO 15512:2019. With an accuracy of 0.0001 % (H<sub>2</sub>O resolution), Aquatrac-V is ready for both QC in the lab and process control.

---



### **Brabender Viscograph-E**

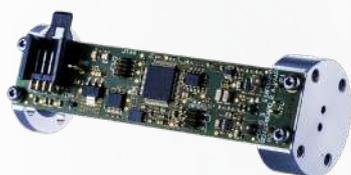
Ensure compliance with Viscograph-E, a standard starch viscometer that measures the gelatinization properties of starch according to ICC and AACCI. Real-time quality monitoring through reference curves and precise temperature measurements enhance accuracy, while a 40 g sample size guarantees homogeneity and minimizes errors. The durable stainless steel beaker and stirrer design is resistant to wear and tear and ensures precision over the instrument's lifetime, letting you avoid follow-up orders associated with disposable systems.

---



### **Inline Density Meter: L-Dens 3300/7300/7400/7500**

The L-Dens inline density meters are more than just state-of-the-art measuring instruments – they're the result of over 40 years of practical experience in process density measurement. The L-Dens 7000 series combines high accuracy and a compact design, making it the first choice for precise density and concentration measurements. Thanks to the modular system and the wide range of integration options, these instruments can be easily integrated into measurement systems or production equipment.



### **Liquid Density Sensor: L-Dens 2300**

The L-Dens 2300 liquid density sensors are compact OEM modules with an accuracy of 1 kg/m<sup>3</sup>. Their small size makes them easy to integrate into measurement systems. The 2 mm oscillating U-tube requires only very low flow rates, and particles with a size of up to 0.7 mm can be handled with ease. The instruments are available with a stainless steel or glass oscillator.



### **Inline CO<sub>2</sub> Sensor: Carbo 5100/6100/6300**

Anton Paar's CO<sub>2</sub> sensors continuously deliver true CO<sub>2</sub> values for any beverage, at an outstanding total cost of ownership. Carbo 6100 and Carbo 6300 are maintenance-free and EHEDG-certified. Beyond process monitoring, the 4-second measuring interval permits reliable and stable closed-loop control of the carbonators. Carbo 5100 uses proven, reliable, super-accurate measuring technology and requires only once-a-year maintenance.



### **Inline Refractometer: L-Rix 4100/5100/5200**

Durable, maintenance-free inline refractometer for real-time concentration measurements and production control of raw, intermediate, and final products. Industry-leading optics and maintenance-free operation with full CIP/SIP capability.



### **Inline Refractometer Sensor: L-Rix 2100/3100**

We bring you what you have long been waiting for: an inline refractometer for continuous brix concentration monitoring in metalworking machines (e.g. cooling lubricants, aqueous polymer quenching fluids), industrial processes, and fruit and vegetable processing, L-Rix 2100 and L-Rix 3100 provide a unique combination of best-in-class quality, price, accuracy, and compactness.



### L-Com 5500

L-Com 5500 is a smart density and sound velocity sensor combined into one instrument with an accuracy of 0.05 kg/m<sup>3</sup> for density measurement and 0.1 m/s for sound velocity measurement. This lets you conduct concentration measurements of 3-component mixtures with just one instrument. This concentration sensor meets the requirements of a wide variety of applications in the chemical, beverage, and pharmaceutical industries.



### Inline Oxygen Sensor: Oxy 4100/5100

The Oxy 4100/5100 inline oxygen sensors measure dissolved oxygen (DO) in real-time, directly at the production line. They provide accurate, drift-free measurements throughout the entire production process.

Oxy 5100 can easily be combined with additional process sensors from Anton Paar to meet all future production- and quality-control requirements. The Oxy 4100 transmitter comes ready with analog outputs and a touchscreen interface.



### Color Sensor: L-Col 6100

The color of beverages is an important key property for guaranteeing the quality of all kinds of beverages. MEBAK<sup>®</sup>-compliant inline color measurement allows you to follow your entire production process, detect the maturity level of your beverage during storage, and control the dosing of additives and the blending process.



### Sound Velocity Sensors L-Sonic 5100/L-Sonic 6100

30 years of experience have substantially contributed to the development of the new generation of sound velocity sensors. The new sensors offer two types of sensing elements: a fork-type L-Sonic 5100 and a tube-type L-Sonic 6100. They are ready for various applications, such as inline concentration measurements, interface detection, or product identification. The sensors continuously monitor the product quality of liquids during production.



### DAVIS 5: Software for the recording, storing, visualization and analysis of measured data

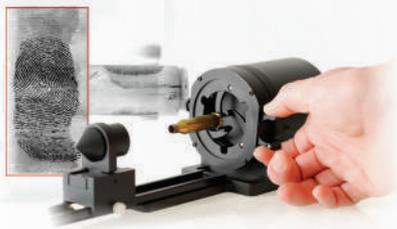
Davis 5 continuously records all sensor-specific and product-specific data which are determined by the mPDS 5 evaluation unit. The modern interface design of the software makes it intuitive and extremely easy to use.

## FINGERPRINT EVIDENCE



### Fingerprint Photography Workstations, DCS®5

DCS 5 is a comprehensive imaging system for the detection, capture and enhancement of almost any type of fingerprint on any surface or background to ensure that maximum detail is revealed. Not only does the DCS 5 high resolution, 36.3MP camera fitted with application specific macro lenses produce images of exceptional quality, advanced digital enhancement, applied simply, maximises print detail to improve the value of evidence.



### Fingerprint Imaging Accessory, Cylindrical Surface Unwrapper (CSU)

'Un-wrap' 2D images of fingerprints on 3D objects including bullets, pens, tools & syringes etc. An innovative new accessory for use with the Crime-lite Imager and DCS fingerprint imaging systems, the Cylindrical Surface Un-wrapper (CSU) enables the forensic examiner to extract 2D images of fingerprints from a 3D cylindrical surface.



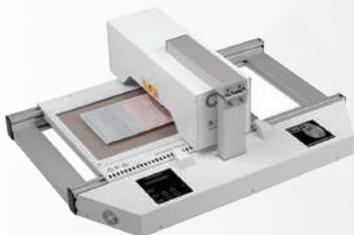
### Fingerprint Fuming Systems, SUPERfume®

SUPERfume is a cyanoacrylate fuming system for developing latent fingerprints in situ at major scenes of crime. Designed to treat domestic rooms, offices, garages, and vehicles, the kit eliminates the need for dismantling fixtures and fittings and transporting items back to the laboratory for processing.



### Novel Fingerprint Enhancement Techniques, Crime-lite® ASV

The Crime-lite ASV is a bench-top viewing enclosure for the stimulation of infrared activated anti-Stokes fingerprint dusting powders. Anti-Stokes powders absorb invisible infrared radiation and re-emit the energy at visible wavelengths, a process that is the reverse of standard fluorescence.



### Thermal Fingerprint Developer, TFD-2

Designed and manufactured by Foster + Freeman, the TFD-2 marks a breakthrough in the detection and enhancement of latent fingerprints using non-destructive thermal development. The first of its kind, the TFD-2 is an automated, high-throughput device capable of developing fingerprints on large quantities of documents, dramatically reducing examination time and manpower requirements.



### Fingerprint Treatments, fpNatural® Powders

IR fluorescent fingerprint powders fpNATURAL® reveal high contrast fingermarks whilst suppressing background interference. Despite the vast quantity of fingerprint treatments currently available, examiners continue to be frustrated by a number of 'difficult' substrates.

## FINGERPRINT EVIDENCE

---



### **Fingerprint Screening Tool, Crime-lite MLD**

A Simply Operated Solution to the Rapid Detection of Fingerprints and Marking-Up of Evidence. Crime-lite MLD is a powerful live-video screening tool that utilizes Reflected-UV and IR imaging technology to quickly locate the presence of fingerprints without the need for chemical staining..

---



### **Rapid Fingerprint Imaging System, AARI**

Uncomplicated, fast and efficient, the AARI Amino Acid Rapid Imager includes multi-spectral illumination sources, and a high-resolution Vis-IR camera equipped with wavelength-specific imaging filters for the semiautomated detection and photography of fingerprints on evidence including sheets of paper and card up to A4/Letter width.

---

## LIGHT SOURCES



### Handheld Forensic Light Sources, Crime-lite® AUTO

A compact handheld device, with the weight and feel of a pro-grade digital SLR camera, the Crime-lite AUTO can reveal evidence including, body fluids (semen, saliva, and urine, etc.); blood on dark fabrics; fingerprints; gunshot residues; and traces of physical evidence (glass, fibers, hairs, etc.)



### Handheld Forensic Light Sources, Crime-lite® 82L

16 high-intensity white LEDs mounted behind a cylindrical lens give a wide floor level light beam that is ideal for detecting surface debris and shoe prints. A concept developed by Foster + Freeman, the Crime-lite 82L produces a 'sheet' of variable intensity (10%, 50%, 100%) white light to reveal floor level evidence and is supplied with blue, green and red clip-on filters to enhance contrast on colored backgrounds.



### Handheld Forensic Light Sources, Crime-lite® 2

A range of lightweight LED forensic light sources effective at short range providing intense, even and shadow free illumination for locating and examining evidence. The range includes a white light model for general search and eight narrow band light sources with wavelengths in UV, violet, blue, blue-green, green, orange, and red for detecting fluorescent stains.



### Handheld Forensic Light Sources, Crime-lite® XL

96 high power LEDs providing 115 Watts of narrowband illumination. Fully portable and robust, the XL has been optimized for wide area examination of crime scenes and emulates the power density and effectiveness of a forensic laser at a fraction of the cost.



### Forensic Laboratory Light Sources, Crime-lite® 8x4MK2

The Crime-lite 8x4MK2 is designed to meet the varying demands of forensic photography enabling the operator to create the optimum illumination for all types of evidence and backgrounds, enhancing image contrast and definition.



### Handheld Forensic Light Sources, Crime-lite® X

A complete ALS kit in a single light source, the Crime-lite X enables the examiner to seamlessly switch between White, UV, Violet, Blue, Blue/Green, Green, Orange, Red, and Infrared LEDs, to perform a comprehensive multi-spectral examination of a crime scene. Operated via a simple 3-button interface, the Crime-lite X provides new functionality, never seen before in a forensic light source, that will ensure that crime scene and laboratory examiners reveal the maximum amount of evidence in every examination.

## LIGHT SOURCES



### **Forensic Laboratory Light Sources, Crime-lite® ML PRO**

The Crime-lite ML PRO is the first in a new generation of evidence screening tools built to meet the demands of busy forensic laboratories tasked with processing large quantities of evidence. With fully-integrated UV-Vis-IR illumination and an 'intelligent optics' imaging system, the ML PRO can be used to mark-up evidence, detecting the presence of bodily fluids, and locating minute fragments of trace evidence.

---



### **UV-Vis-IR Examination Systems, Crime Scene Investigation**

Crime-lite® Beyond Visible is a unique range of products designed to search for evidence in the UV and IR wavebands - beyond the limits of human vision- in order to detect the presence of blood and other body fluids, and to reveal fingerprints while greatly suppressing backgrounds.

---

## DOCUMENT EXAMINATION



### VSC®8000/ VSC®80 & VSC®80i Workstations

The VSC®8000/ VSC®80 & VSC®80i Workstations combines sophisticated digital imaging and multi-wavelength LED technology with a clear and efficient software interface, to provide a complete solution to the examination of all forms of questioned documents.



### 2nd Line Document Examination, VSC®QC1+

Far more than a desktop scanner, the touchscreen VSC®QC1+ enables a series of high-level checks to be carried out on a passport or ID card in seconds, combining ease of use with rapid examination, facial comparison, and data capture.



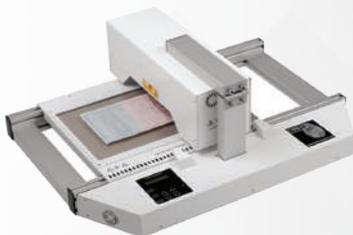
### 2nd Line Document Examination, eye-D®

Designed for checking standard security features of travel documents, the eye-D® is a low-cost system that can be deployed in large numbers to improve national and border security. Compact, lightweight, and with a padded carrying case that unfolds to provide light shielding, the eye-D® is designed for use in any location from either standard AC power source or 12V DC from a vehicle.



### Reveal Indented Writing, ESDA® 2 & ESDA®lite

ESDA® works by creating an electrostatic image of indented writing, which is then visualized by the application of charge sensitive toners. The sensitive imaging process reacts to sites of microscopic damages to fibers at the surface of a document, which have been created by abrasive interaction with overlying surfaces during the act of handwriting.



### Advanced Document Analysis, ECCO®2

With a large sample chamber, ECCO 2 is designed for the analysis of paper, glass, metals, paint, fibres, minerals and gunshot residues by laser induced breakdown spectroscopy (LIBS) providing elemental analysis on materials as small as 300 microns.



### Raman Spectrometers, FORAM®3

Fast, non-destructive and highly effective, Raman spectroscopy is an ideal technique for identifying and comparing substances of forensic value. Unlike other Raman systems, the foram3 has been developed specifically for forensic examinations and includes dedicated casework management software providing automatic spectral comparisons and data archiving with search and match facilities.

## TRACE EVIDENCE



### Multi-Examination System Workstation, ffTATM

The ffTA is a powerful and flexible multi-functional system that provides the crime laboratory with a range of analytical facilities on a single microscope operated through a single PC. By switching from module to module the operator can perform a wide range of analytical tasks to extract the maximum amount of forensic evidence in the shortest possible time.



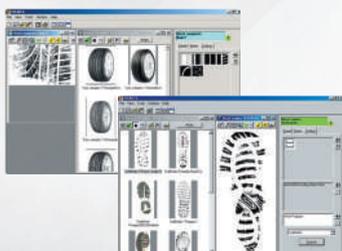
### Raman Spectra Databases

A comprehensive collection of libraries has been compiled by S.T. Japan and formatted for use with the Forum and ffTA systems. In total over 9,000 spectra of common and specialist materials are available divided into 20 categories. In addition to identification databases provide information on manufacturer, lot number, appearance, purity, IUPAC name etc.



### Forensic Laser-Induced Breakdown Spectroscopy (LIBS), ECCO®2

With a large sample chamber, ECCO 2 is designed for the analysis of paper, glass, metals, paint, fibers, minerals and gunshot residues by laser-induced breakdown spectroscopy (LIBS) providing elemental analysis on materials as small as 300 microns.



### Footwear Identification, SICAR®6

SICAR 6, in conjunction with the SoleMate footwear database, is a complete solution for the identification of shoe prints recovered from crime scenes and the management of shoeprint evidence. A sole pattern coding technique is used to characterize a shoe print. The code set is then searched for in the footwear database for matches.



### Footwear Identification, SoleMate®

The SoleMate database contains details of more than 37,000 items of footwear including sample shoe prints. Updated four times per year with information and images of the latest sports, work and casual footwear from all major brands, SoleMate® provides users with the ability to identify shoe prints from crime scenes.



### FPX VIEWER, Footwear Identification, SoleMate®

SoleMate® FPX VIEWER allows users to quickly and easily identify footwear marks discovered at the crime scene using 'visual coding' method employed by SICAR 6. Using combinations of shapes, patterns, text and logos to describe the visible characteristics found on a scene of crime shoeprint, it is possible to identify matching items of footwear in SoleMate® in a matter of minutes via the intuitive search interface



### OrigaTrod - Rotating Electrode for OGS EDT

OrigaTrod- Electrode Drive Turning- EDT / RDE:

- 100 to 10,000 rev / min- capless
- rotating electrode has to be connected to an apparatus of the range OrigaStat.
- Fits the OrigaCell kit of OrigaStat



### OrigaTrod Kit - Electrode Hard Turning

- OrigaTrod: rotating electrode with optical encoder (EDI101 equivalent A35T040)- 100 to 10,000 rev / min- capless
- OrigaBox: speed controller for rotating electrode
- Power supply 100-240V / 24V-1A continues
- USB for PC software
- USB cable 2m and 2m sector
- OrigaDoc: Manual
- briefcase



### OrigaTrod kit - Rotating Electrode

- OrigaTrod: rotating electrode with optical encoder- 100 to 10,000 rev / min- capless
- OrigaBox: speed controller for rotating electrode
- Power supply 100-240V / 24V-1A continues
- USB for PC software
- USB cable 2m and 2m sector
- OrigaDoc: Manual
- briefcase



### OrigaTrod Lt - Rotating Electrode with Potentiometer

- OrigaTrod: rotating electrode (EDT / RDE)- 100 to 5000 rev / min- capless
- integrated speed controller
- Potentiometer for manual control of the rotation speed
- AC Adapter 100-240V / 24V-1A continues

## POTENTIOSTAT & GALVANOSTAT

### SINGLE CHANNEL



#### OrigaStat - All in one

- Potentiostat Galvanostat All in one:
- Galvanostat
- LCR
- speed controller for rotating electrode
- pH meter
- Temperature probe
- Warranty 5 Years



#### OrigaStat - OGS080

- Potentiostat
- Galvanostat
- Impedancemeter
- speed controller for rotating electrode
- 17V 100mA USB



#### OrigaStat - OGS100

- potentiostat
- galvanostat
- LCR
- pH meter
- Temperature probe
- speed control for rotating electrode
- Control of external devices
- 17V and 100mA



#### OrigaStat - OGS200

- potentiostat
- galvanostat
- LCR
- pH meter
- Temperature probe
- speed controller for rotating electrode
- Control of external devices
- 35V 2A USB

## POTENTIOSTAT & GALVANOSTAT

### MULTI-CHANNELS



#### **OrigaFlex - OGF500**

- potentiostat
- galvanostat
- Temperature probe
- Support Connector Batteries
- 20V 500mA USB



#### **OrigaFlex - OGF01A**

- potentiostat
- galvanostat
- Temperature probe
- Support Connector Batteries
- 20V 1A USB



#### **OrigaFlex - OGF05A**

- potentiostat
- galvanostat
- Temperature probe
- Support Connector Batteries
- USB 20V 5A



#### **OrigaFlex - OGF10A**

- potentiostat
- galvanostat
- Temperature probe
- Support Connector Batteries
- 20V 10A USB

## POTENTIOSTAT & GALVANOSTAT

### FIELD POTENTIOSTAT



#### LandStat - 1 single channel

- potentiostat
- galvanostat
- LCR: 100  $\mu$ Hz-1 KHz
- pH meter
- Temperature probe
- speed controller for rotating electrode
- Control of external devices
- 17,5V 100mA USB



#### LandStat - 1 + 1 channel EIS 5 MHz

- potentiostat
- galvanostat
- LCR: 100  $\mu$ Hz-5 KHz
- pH meter
- Temperature probe
- speed controller for rotating electrode
- Control of external devices
- 17,5V 100mA USB



#### LandStat - 2-way

- potentiostat
- galvanostat
- LCR: 100  $\mu$ Hz-1 KHz
- pH meter
- Temperature probe
- speed controller for rotating electrode
- Control of external devices
- 17,5V 100mA USB



#### LandStat - 2 channels + 1 EIS 5 MHz

- potentiostat
- galvanostat
- LCR: 100  $\mu$ Hz-5 KHz
- pH meter
- Temperature probe
- speed controller for rotating electrode
- Control of external devices
- 17,5V 100mA USB



#### LandStat - 2-Way + 2 EIS 5 MHz

- potentiostat
- galvanostat
- LCR: 100  $\mu$ Hz-5 KHz
- pH meter
- Temperature probe
- speed controller for rotating electrode
- Control of external devices
- 17,5V 100mA USB

## POTENTIOSTAT & GALVANOSTAT

### BiPOTENTIOSTAT



#### OrigaStat - Configuration bipotentiostat

- Potentiostat Galvanostat All in one:
- LCR
- Modulation of powers: 100mA or 2A
- Measurement of the electrode against
- pH meter
- Temperature probe



#### OrigaFlex - The modular bipotentiostat

- Modular potentiostat Galvanostat:
- LCR
- Modulation of powers: 500mA, 1A or 5A
- Measurement of the electrode against
- True multi-Potentiostats
- Temperature probe



#### LandStat - The field bipotentiostat

- Potentiostat Galvanostat All in one:
- LCR
- Ideal for field measurements
- Measurement of the electrode against
- pH meter
- Temperature probe

## BENCHTOP PH METER



#### OrigaMeter - Benchtop pH meter OpH218

This pH-meter OrigaLys (founded by former engineers from Radiometer) has an easy to learn and ideal characteristics for teaching. Durable and with a 5 year warranty (excluding consumables), it can integrate with existing pH meter park because its interface is compatible with those of former Radiometer pH meters.

## ELECTROCHEMISTRY

### LOW CURRENT PROBE



#### OrigaMu - Low Current Probe

M $\mu$  is an Ultra-low current probe resulting know-how and experience of the OrigaLys team in the design of efficient electrochemical systems. Only a perfect knowledge of the most advanced analogue technology reaches this level of excellence: 1pA full scale range with a 30aA resolution.

## OTHER ACCESSORIES



#### OrigaTip - tips

OrigaLys provides a wide range of tips

- Composition: PEEK
- Diameter: 0, 1, 2, 3, 4 or 5mm.

## ELECTRODES



#### OrigaSens - Electrodes

Discover our selection of electrodes:

- Reference Electrodes
- Metallic Electrodes
- Combined Electrode
- pH Electrodes
- Ion Selective
- Electrode Conductivity Cell
- $\mu$  Electrode
- Working Electrodes
- Other Probes
- Industrial Electrodes
- Cords



### HS2022

The HS2022 is the most sensitive small radius IRMS in the world. Combining superior analytical performance with reliability, flexibility, ease of use and maintenance, the HS2022 IRMS ensures that all your scientific needs are met. Backed by over 20 years of development with a no compromise approach to its engineering integrity, Sercon provides the ultimate isotope ratio mass spectrometer. This technology is available in both continuous flow and dual inlet mode, and can be interfaced to a wide range of sample preparation devices and inlets. The HS2022 IRMS incorporates many high level design features, including an extremely robust, linear and sensitive source, a stainless steel flight tube, a thoria-coated filament, and high resolution amplifiers for a large dynamic range.



### Integra2

The Integra2 combines many of the high level design features of our IRMS and EA instruments, including our innovative trapping loop technology, a stainless steel flight tube, thoria coated filament which is resistant to oxidation, and our high sensitivity source is now available as an optional upgrade. This combined EA-IRMS is a product unique to Sercon and provides excellent data without breaking the budget. Capable of analysing samples for both  $^{15}\text{N}$  and  $^{13}\text{C}$  simultaneously with a 34S or 18O option, the Integra2 provides the most cost effective and easy to use elemental and isotopic analyser available.



### ABCA2

The ABCA2 is the high performance, high sample throughput isotope ratio mass spectrometer for breath analysis. The outstanding performance and versatility, combined with user friendly software, make the ABCA2 the only choice for  $^{13}\text{C}$  breath tests. Superior performance, high sample throughput and unlimited sample capacity ensure that this is the ultimate instrument for *Helicobacter pylori* detection. Other demonstrated  $^{13}\text{C}$  applications include: fat malabsorption, pancreatic function, lactose intolerance, bile acid circulation, gastric emptying, liver function and metabolic turnover rate measurements.



### TOC

Sercon have developed, in close collaboration with Thermalox, a hyphenated TOC-IRMS system. The Thermalox TOC uses a combustion technique, which is superior to the persulphate oxidation method in that water samples containing high humic material can be analysed. The TOC is connected to the Sercon HS2022 via a modified version of the Cryoprep, which has been optimised for TOC hyphenation. The system is capable of measuring small (sub 1ml) sample volumes and analysing DOC concentrations from 0.5 to 10ppm at levels of high precision (typically 0.1% for  $^{13}\text{CO}_2$  determinations).

## BWB FLAME PHOTOMETER RANGE



### **The BWB XP Flame Photometer** **Our award winning 5 channel instrument**

The BWB XP was designed from the ground up, using new, innovative and modern technology to give unsurpassed levels of accuracy, usability and reliability while significantly reducing analysis time. Our customers do not need to waste valuable time changing filters and re-calibrating when a different measurement is required, as is a common requirement in all other Flame Photometer designs from 1951 to the present.



### **The BWB XP Plus Flame Photometer** **Our award winning 4 channel instrument**

The BWB XP PLUS was designed around the BWB-XP providing enhanced functions to give more utility while maintaining the unsurpassed levels of accuracy, usability and reliability while significantly reducing analysis time. Our customers do not need to waste valuable time changing filters and re-calibrating when a different measurement is required, as is a common requirement in all other Flame Photometer designs from 1951 to the present.



### **The BWB BIO Flame Photometer** **For biological applications**

The BWB BIO has been created for measuring biological solutions and is modernized for today's research work; which requires routine, quick measurements, with high levels of accuracy for lithium, calcium, sodium and potassium elements.



### **The BWB NUCLEAR Flame Photometer** **Online, four channel Lithium detection**

Designed in conjunction with our outstanding distributor in Germany, Mr. Wolfgang Glock, this unique flame photometer has 4 active channels for Lithium detection. Each channel is independently calibrated within the range of interest and this results in an increase of accuracy in keeping with industry demand.



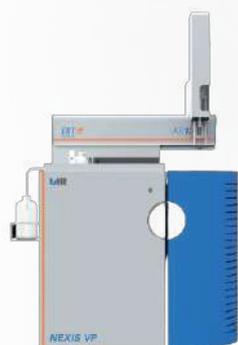
### **The BWB SUGAR Flame Photometer** **Redefining Sugar refining from beet or cane**

This Specialty Flame Photometer has been requested and designed for the global Sugar Production marketplace. There were a few traditional Flame Photometer manufacturers over the decades who had served this market and now these robust and fantastic units are coming out of service.



### NEXIS TN-TS-TX ANALYZER

The NEXIS is designed to facilitate high sample throughput by optional addition of the AS120 liquid autosampler that will support both syringe and boat introduction methods with high performance and reliability. This solution provides a fully automated trace level combustion analyzer, which can be extended with heated sample tray capability. For Gas and LPG samples the NEXIS TN/TS/TX analyzer can be connected to a NEXIS GM module to facilitate this kind of samples with fast connectivity and ease-of-use operation through NEXIS LINK software.



### NEXIS VP TN-TS ANALYZER

The NEXIS VP is designed to facilitate high sample throughput by the AS120 liquid autosampler through syringe introduction methods with optional heated and cooled sample trays. For Gas and LPG samples the NEXIS VP TN/TS analyzer can be connected to a NEXIS Gas Module (GM) module to facilitate the safe and automated sampling and analysis process for these type of samples with fast connectivity and ease of use operation through NEXIS LINK™ software.

## AUTOSAMPLERS



### NEXIS GM Autosamplers

Sampling of Gas and LPG samples require a safe and reliable solution in connection to a Combustion Analyzer to measure trace levels of nitrogen, sulfur and chlorine. The TSHR NEXIS GM includes hardware features such as hydrocarbon and pressure sensors and accurate sampling valves to ensure a safe operation. The NEXIS GM is available in three different configurations to meet customer's requirements with handling of low and high pressure Gas & LPG samples.



### AS 120 Autosamplers

The AS120 autosampler combines state-of-the-art component technology with easy-to-use operating features that meet routine as well as research level auto sampling requirements. The AS120 is an all-electric, stepper motor driven autosampler providing rugged reliability and pinpoint injection accuracy.



### **BalScan** **Ballistic Identification System**

Markings on fired ammunition can be examined and compared using the BalScan system. Cartridge cases and bullets are scanned in 3D and saved to a database. The database can be searched automatically to produce a hit list of possible matches. After that, there is a full set of comparison functions prepared to help a forensic expert confirm the match.

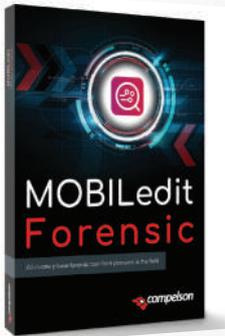
---



### **ToolScan R360** **A System for Examination of Toolmarks**

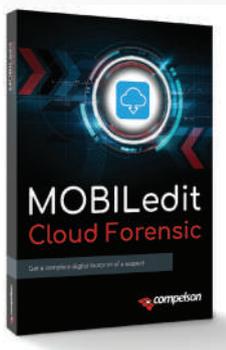
ToolScan System is a complete solution for scanning, examination, and comparison of toolmarks such as: striations and imprints of plier jaws left on cylinder locks, cuts in wires, cuts in tires, test impressions in lead or toolmark castings. Plier jaws or blades can be scanned directly and compared with the marks, line intersections on signatures may be examined or broken objects may be scanned for physical match verification.

---



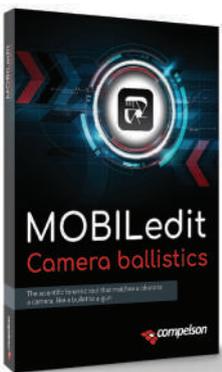
### MOBILEdit Forensic

MOBILEdit Forensic is an all-in-one solution for data extraction from phones, smartwatches and clouds. It utilizes both physical and logical data acquisition, has excellent application analysis, deleted data recovery, a wide range of supported devices, fine-tuned reports, concurrent processing, and easy-to-use interface. With a brand new approach, MOBILEdit Forensic is much stronger in security bypassing than ever before.



### MOBILEdit Cloud Forensic

People interact within today's digital universe through their phones and applications, leaving digital footprints everywhere. For a full and successful digital investigation, it is necessary to analyze all traces. Phone forensics is extremely important, but what is stored in a mobile device is only a snapshot of the overall data. The evidence found in clouds, message platforms, and social networks brings a complete insight into a person's life. Understand their lifestyle, activities, personality, likes/dislikes, preferences, and social activities through services such as Facebook, Instagram, LinkedIn, Twitter, Slack, or Google apps.



### MOBILEdit Camera Ballistics

Camera Ballistics is a unique software product that uses advanced algorithms and cutting-edge technology to determine if a photo was truly taken by a suspected camera or not.

Photos contain more information than what you can see in the image. Camera Ballistics' unique scientific algorithm goes deeper than just EXIF. It will identify if a photo was taken by a suspected camera device or not, giving you maximum data from photos and making Camera Ballistics an essential tool for every forensic investigator.



### Smartwatch Forensics

Smartwatches are the world's most popular wearable devices with unquestionable importance when it comes to forensic examinations. The personal data found in smartwatches can lead investigators in the right direction, especially when the phone is nowhere to be found. MOBILEdit Forensic can even extract heartbeat details, which gives the investigator an intimate look into the life of the user. This data reveals moments of excitement, stress, and even time of death. For a successful investigation, examining smartwatches is a necessity.

## BENCHTOP NMR SPECTROMETERS



### **Benchtop NMR Spectrometer 60 MHz** **60 PRO Multinuclear | 60e Proton Only**

With the magnet, electronics and computer in a single enclosure, the 60 MHz is the best all-in-one benchtop NMR spectrometer in its class. Compact and high performance benchtop NMR making it resilient to the rigours of a busy laboratory.



### **Benchtop NMR Spectrometer 100 MHz** **100 PRO Multinuclear | 100e Proton Only**

Easy-to-use, low maintenance 100 MHz NMR improves productivity and workflow with rapid, accurate results. Run the experiments you want and quickly receive the results you need with ease.



### **SpecFIT HRC27**

Low-field Nuclear Magnetic Resonance (NMR-DT) equipment with user-friendly interface software and data analysis under development. Compatible with Industry 4.0.



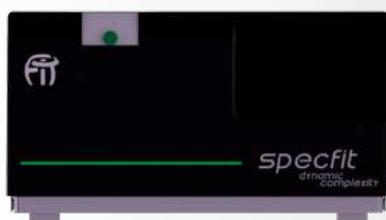
### **SpecFIT HR50**

Low-field Magnetic Resonance Equipment (DT-NMR) with easy-to-operate software, with certified analyzes (ISO, AOCS, etc).



### **SpecFIT HR100**

Low-field Magnetic Resonance Equipment (DT-NMR) with easy-to-use software, with ISO and AOCS certified analysis.



### **SpecFIT Dynamic Complexity**

In partnership with USP, we created SpecFIT DC, low-field NMR equipment dedicated to research and development in the area of Materials Science, with applications in porous media, such as rocks, cement and polymeric compounds.



### **Q.One NMR**

For NMR spectrometers in need of repair, upgrade or replacement, consider the Q.One NMR Replace & Renew program. The Q.One-Quantum-I-Plus console and accessories will completely automate your existing system for a high level of performance and productivity at a fraction of the cost of the new system.



### **DiscovIR-GC™**

#### **The Solution to Isomer Identification and Complex Mixture Analysis**

The New Spectra Analysis DiscovIR System is the perfect solution when identifying the components in a complex mixture. Infrared spectroscopy provides each compound's unique fingerprint, making it quick and easy to identify each peak by comparison to the extensive solid phase IR libraries. The DiscovIR system is particularly useful in identifying structural isomers, which can be a challenging area for Mass Spectrometry.



### **DiscovIR-LC™**

#### **Reversed phase LC-IR spectra collected in real time with physical solvent removal.**

DiscovIR's unique temperature controlled, vacuum deposition method ensures that results are accurate and reproducible. Eluted peaks are first deposited in a film on to a rotating IR transparent disc. Next, an infrared beam passes through each concentrated spot and the detector automatically collects spectral data.



# OUR SERVICES



# H. A. SHAH & SONS

## CERTIFIED SERVICE - WORKING FOR YOU

When you purchase your instrument from H. A. Shah & Sons, you choose a high-quality product that you rely upon for its accuracy and stability. Given the proper care, your instrument should provide years of reliable operation. H. A. Shah & Sons has several service programs designed to meet your needs. From the recommended preventive maintenance programs to repair coverage and emergency service, H. A. Shah & Sons will ensure you get the most out of your investment.

TO SERVICE YOUR INSTRUMENT CONTACT

**Customer Service Center**

TOLL FREE:

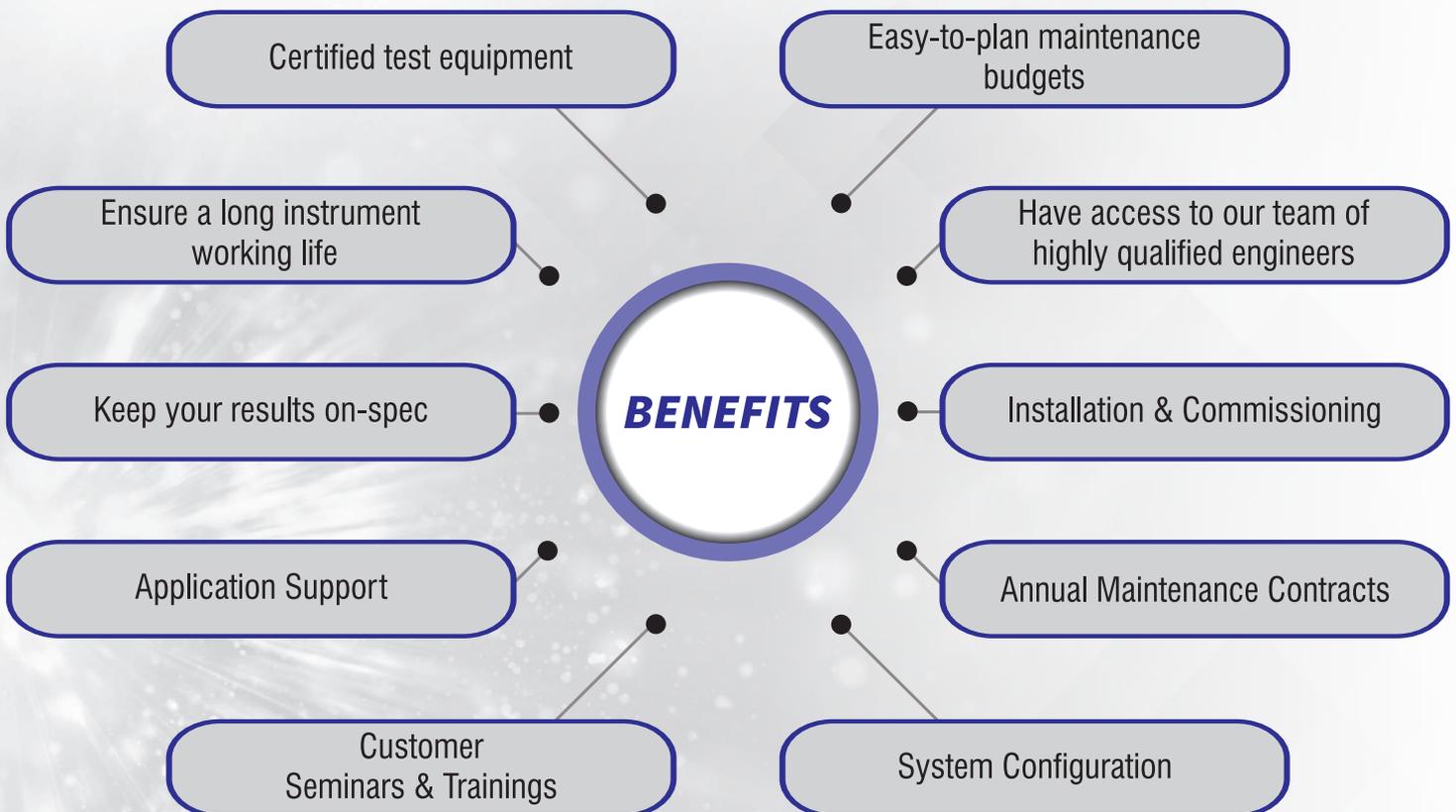
**0800-22753**

E-MAIL:

[customer.service@hashah.com](mailto:customer.service@hashah.com)



## BENEFITS & OTHER SERVICES





To meet the growing demand for professional and qualified technical services, H. A. Shah & Sons Technical Service Department has a team of highly qualified and skilled service professionals with wide-ranging expertise in installation, configuration and commissioning. Our staff is fully trained and equipped to meet the service requirements of our clients.

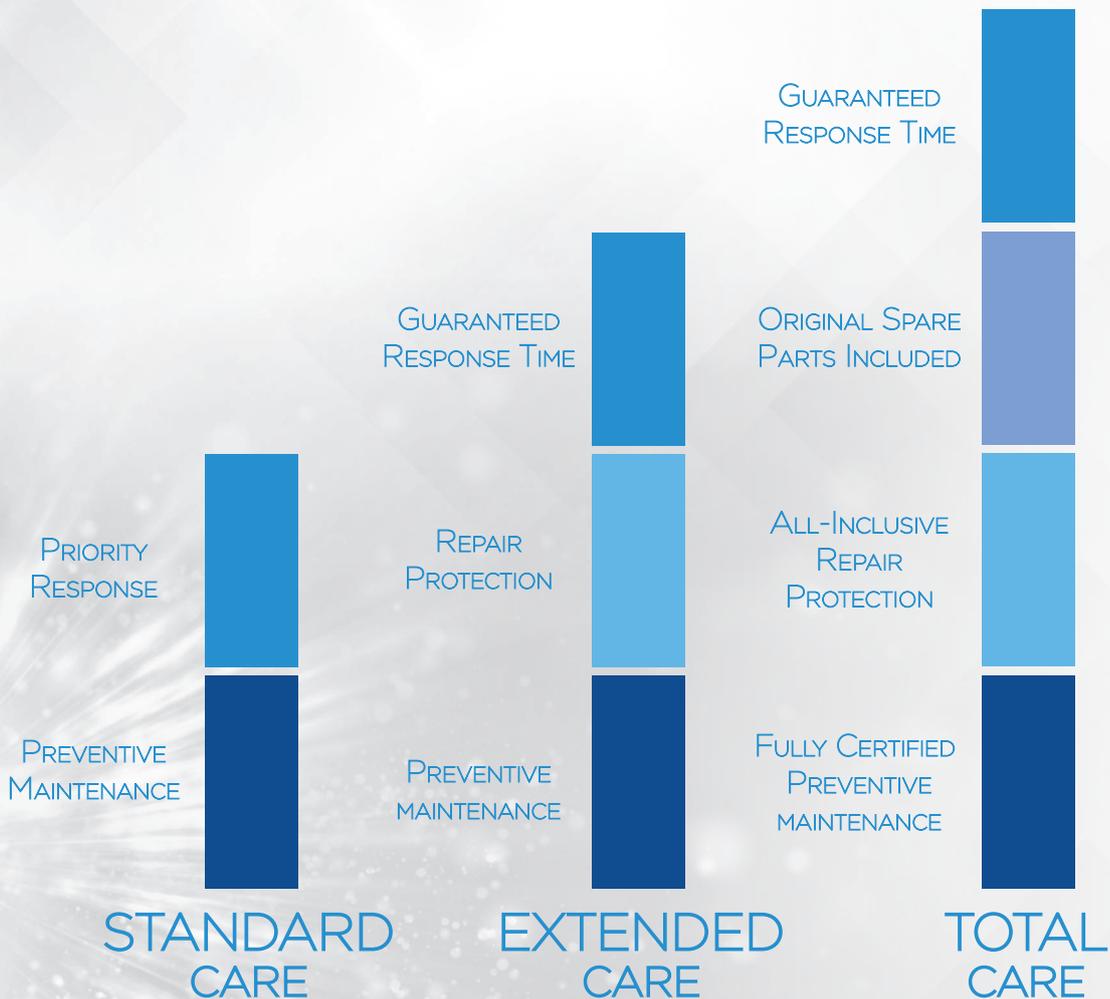
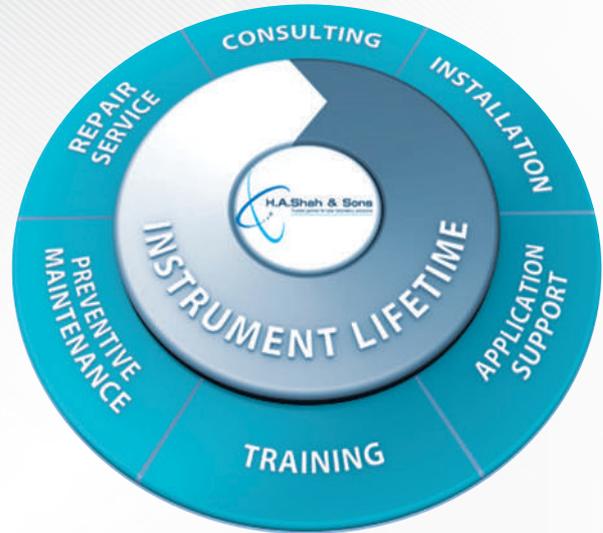
H. A. Shah & Sons proposes annual contracts to reduce or even eliminate the need for remedial interventions which are frequently penalizing for a laboratory. Excellent results under testing conditions have allowed us to establish a dynamic and efficient service structure. Our service engineers and application chemists are fully equipped to provide immediate on-location backup services to our customers. Similarly, the after-sales services personnel of H. A. Shah & Sons are fully trained to not only intervene for preventive or remedial maintenance on all laboratory equipment but also installation and training needs.

## OTHER SERVICES

- Application Support
- Installation & Commissioning
- Warranty Service
- Repairs & Maintenance
- Annual Maintenance Contracts
- System Configuration
- Customer Seminars & Training

# CHOOSE THE RIGHT SERVICE PACKAGE

The services offered by H. A. Shah & Sons are geared to your requirements. You can choose from a range of three Annual Maintenance Contracts, which build on each other in terms of scope and provision.



# ANALYTICAL EXCELLENCE CENTER - KARACHI & LAHORE

A PLATFORM WHERE OUR FOREIGN-TRAINED EXPERTS  
SHARE THEIR BEST APPLICATION SKILLS & KNOWLEDGE

- Gas Chromatography
- Liquid Chromatography
- Mass Spectrometry
- Spectroscopy
- Dissolution
- Sample Preparation
- Software & Informatics
- Columns, Parts & Supplies
- Density Meter
- Microwave Digestion
- Polarimeter
- Refractometer
- Rheometer
- Viscometer
- Solid Density Analyzers
- pH Meters
- Next-Generation Sequencing
- Genetic Analysis
- PCR Thermal Cyclers
- Real-Time PCR (qPCR)
- Manual Liquid Handling
- Centrifugation
- Microarray Solutions
- Automated Electrophoresis
- Flow Cytometry
- Cell Analysis
- Electrochemistry
- Robotic Arm for GC/MS and LC/MS

## COURSES OFFERED

1. Chromatography theory.
  - Separations and resolution.
  - Factors influencing separations.
2. Understanding the influencing factors of separations.
  - The carrier and mobile phase.
  - The science of columns and stationary phase.
  - Influence of temperature.
3. Establishing a strategy for chromatography method optimization.
4. Evaluation of chromatography method robustness.
5. Detectors specificity and selectivity.
6. Spectroscopy techniques.



TO SERVICE YOUR INSTRUMENT CONTACT  
**Customer Service Center**

TOLL FREE:

**0800-22753**

E-MAIL:

[customer.service@hashah.com](mailto:customer.service@hashah.com)

## PAKISTAN

---

### ISLAMABAD (Head Office)

3rd Floor, 109 W Sardar Begum Plaza  
Jinnah Avenue, Blue Area  
Telephone: +92 51 234 8515 (-9)  
Fax: +92 51 234 8520

### KARACHI

#20-F/2, Block-6, P.E.C.H.S  
Telephone: +92 21 3452 5777, 3452 5753  
Fax: +92 21 3452 5710

### LAHORE

6th Floor, 612, 89-B/III  
Al-Hafeez Business Center, Gulberg-III,  
Telephone: +92-42-35712147 (-8)  
Fax: +92-42-35879284

### PESHAWAR

UG-457, Deans Trade Centre  
Telephone: +92 91 525 3031  
Fax: +92 91 525 3031



hashahgroup



hashahgroup



HAShahGroup