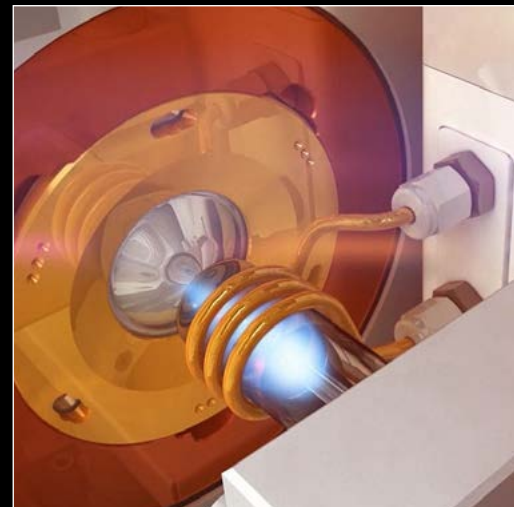
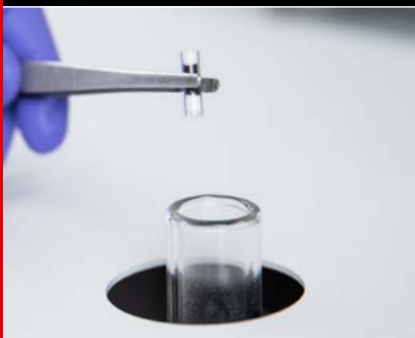


Analytik Jena

Product Overview Chemical Analysis

Product Overview Chemical Analysis





Innovative Analytical Solutions

Analytik Jena stands for high-quality analytical instrumentation tailored to the needs of our customers. At our R&D and production sites throughout Germany, we develop and manufacture innovative products characterized by their unique analytical performance.

Tradition with innovative power

Analytik Jena is a leading provider of analytical measuring technology, instruments in the field of molecular biology, and liquid handling and lab automation technologies. The company is present for its customers in many industries, as well as over 100 countries.

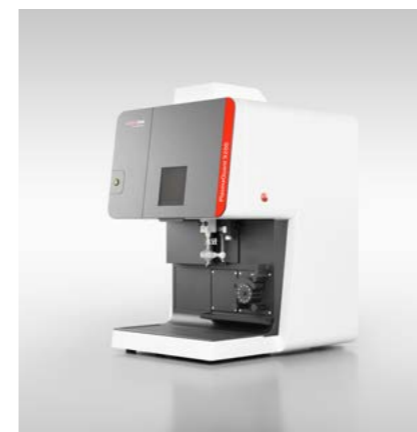
Analytik Jena's analysis instruments are used whenever precision and reliability are required. Whether it is water analysis, environmental monitoring, health care, or quality control, the company's devices guarantee that strict standards have been maintained. Services, as well as device-specific consumables and disposables, such as plastic articles, complete the extensive range of products.

Analytik Jena which is headquartered in Jena (Germany), was founded in 1990 and is today part of the Swiss Endress+Hauser Group.

Industries and fields of application:

- Environment
- Chemicals & Materials
- Pharma & Life Science
- Food and Agriculture
- Geology, Mining & Metals
- Petro Industry
- Power & Energy

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Elemental Analysis

Our portfolio ranges from line source (LS) and high-resolution continuum source (HR-CS) atomic absorption spectrometry (AAS) to inductively coupled plasma systems for optical emission (ICP-OES) and mass spectrometry (ICP-MS).

Whether you are looking for a solution for routine analysis of a few elements with moderate sample quantities or for high-throughput multi-element analysis, we offer devices that can be optimized to your application.



AAS

novAA 800 Series



The routine analyzer

novAA 800 is the reliable all-rounder, making routine analysis of diverse samples efficient and cost-effective.

novAA 800 series at a glance:

- Cost-effective – top performance at low investment and operating costs
- Simple – easy handling thanks to user-friendly concepts
- Reliable – stable measuring conditions due to robust components and clever design
- Powerful – high throughput due to integrated sampling and dilution

novAA 800 F – AAS for flame and hydride technology
 novAA 800 G – AAS for graphite furnace technology
 novAA 800 D – AAS for flame, hydride, and graphite furnace technology

AAS

ZEEnit Series



Meeting every demand

ZEEnit is the plus in your laboratory. It convinces with its cost efficiency, fast and reliable analysis and excels in the analysis of samples with high matrix.

ZEEnit series at a glance:

- Reliable trace analysis even in most difficult matrices
- Wide dynamic concentration range
- Best in class usability – no expert knowledge required

ZEEnit 650 P – high-performance graphite furnace AAS
 ZEEnit 700 P – high-performance AAS for flame, hydride, and graphite technique

HR-CS AAS

contrAA 800 Series



Atomic Absorption. Redefined.

Multi-element analysis and ease of use at a manageable cost. The contrAA 800 combines the best of standard AAS instruments and ICP-OES spectrometers. Take your demand for precision and performance to the next level and cover the entire range of AAS with a single lamp.

contrAA 800 series at a glance:

- Fast multi-element analysis
- Accurate results with maximum precision
- Extended measuring range
- Xenon short arc lamp as single light source for all applications
- Reduce measurement time by up to 30% thanks to fast-sequential analysis
- Flexible method development with 3D visualization of absorption spectra
- Determination of metals, semi-metals, metalloids, and even non-metals



contrAA 800 F – HR-CS AAS for flame and hydride technology

contrAA 800 G – HR-CS AAS for graphite furnace technology, including solid AA and hydride technology

contrAA 800 D – the most versatile system for HR-CS AAS offering flame, hydride, and graphite furnace technology, including solid AA



More information online
www.analytik-jena.com/novaa



More information online
www.analytik-jena.com/zeenit

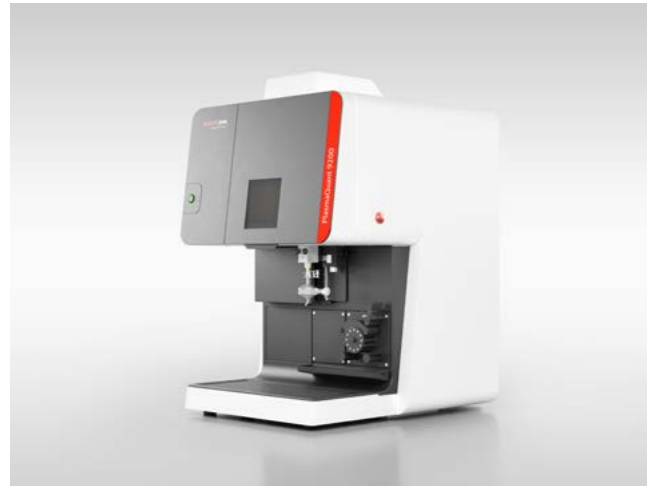


More information online
www.analytik-jena.com/contraa



ICP-OES

PlasmaQuant 9200 Series



Compact Size. Peak performance.

Discover market-leading resolution with unmatched matrix tolerance in a compact analyzer. Enjoy efficiency, easy handling, and the smallest footprint in the ICP-OES market.

Thanks to its unique instrument design and stable plasma flame, the PlasmaQuant 9200 series offers not only the highest resolution and best detection limits for any sample type, but also the smallest instrument footprint. In combination with unmatched reliability and easy handling, Analytik Jena's new ICP-OES instrument will be the key for your successful labwork.

PlasmaQuant 9200 series at a glance:

- Analytical excellence – Unparalleled resolution of 2 pm @ 200 nm and best detection limits with long-term stability
- Space-saving powerhouse – Fast instrument start-up, robust plasma and the smallest footprint on the ICP-OES market
- Simply reliable – Effortless handling, easy consumable replacement, and full flexibility

PlasmaQuant 9100 – cost-effective analysis without compromises

PlasmaQuant 9100 Elite – High-resolution analysis of challenging samples



More information online
www.analytik-jena.com/icp-oes



ICP-MS

PlasmaQuant MS Series



ICP-MS tailored to your requirements

Mass spectrometry with inductively coupled plasma (ICP-MS) is the versatile, sensitive, and fast analytical standard method in various fields of application. With the PlasmaQuant MS series, Analytik Jena offers ICP-MS that exceed all expectations in terms of reliability, precision, and throughput and fulfill all requirements for sample handling, robustness and compliance.

PlasmaQuant MS Series at a glance:

- Sensitive – 1500 Mcps/ppm at <2% CeO
- Cost-effective – half the argon consumption of comparable ICP-MS systems
- Fast – 50 % higher sample throughput
- Robust – matrix-independent long-term stability
- Versatile – optimized for research and routine use

PlasmaQuant MS – the robust ICP-MS for sensitive characterization of high matrix samples

PlasmaQuant MS Q – the universal ICP-MS for high throughput and best detection limits in routine monitoring and quality control

PlasmaQuant MS Elite S – the specialist with elite sensitivity and best signal-to-noise ratio for unparalleled ultra-trace performance

PlasmaQuant MS Elite – the flexible system with ultimate sensitivity and targeted performance optimization for advanced research

More information online
www.analytik-jena.com/icp-ms



Combustion Elemental Analysis

In the field of combustion elemental analysis we offer versatile solutions regardless of the complexity of your sample matrix or your throughput needs. Our combustion elemental analysis devices offer robust methods and reliable analysis results for parameters such as organic halogens (AOX/TOX, EOX, POX), and C/N/S/Cl in solid, liquid, and gaseous samples.



C/N/S/X multi EA 5100



Your entire C/N/S/X lab in one device

The multi EA 5100 is your flexible all-rounder for sulfur, nitrogen, chlorine, and carbon analysis in solids, liquids, and gases. Benefit from the combination of outstanding robustness and sensitivity, best service, and cost-effective high-throughput analysis in every matrix – in QC laboratories, in research, or in contract analysis.

multi EA 5100 at a glance:

- Unparalleled application variety without the need for time-consuming device modification
- Unattended operation and reliable results with the Self Check System
- Smart safety features and pre-configured methods simplify your analysis
- One analyzer for all applications, no matter if the sample is solid, liquid, or gaseous.
- Vertical and horizontal combustion combined in one system

N/S in Liquids/Gases compEAct Series



Choose the EASy way

In times of limited lab resources and an increasing number of samples compEAct provides fast and cost-effective determination of sulfur and nitrogen in liquids, gases, and LPG samples for refineries, quality control, and contract labs.

compEAct series at a glance:

- Reliable analysis of sulfur and nitrogen
- Maximum sample throughput for higher efficiency
- Minimum maintenance requirements, maximum safety
- Save lab space with minimum footprint
- Time-saving features: pre-calibrated, factory-tuned, short measurement times, 24/7 operation

compEAct N – elemental analyzer for total nitrogen (TN) determination

compEAct S – elemental analyzer for total sulfur (TS) determination

compEAct S MPO – elemental analyzer for interference-free sulfur (TS) determination in fuels and other refinery samples

C/S/X in Solids multi EA 4000

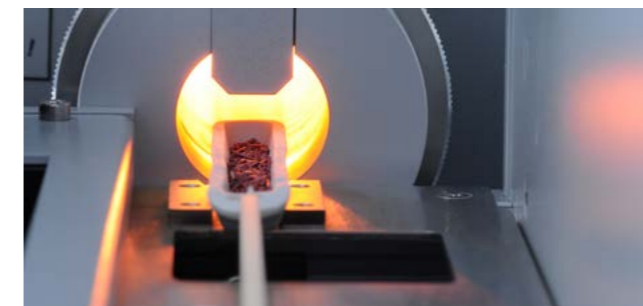


The workhorse for your solids analysis

The multi EA 4000 is the ideal partner for your solids analysis, offering safe automation, enhanced analysis precision and reliability thanks to patented innovative solutions. The system has been created to cope with the most diverse sample matrices, while keeping operating costs and maintenance low.

multi EA 4000 at a glance:

- Unique application diversity (TS, TC, TX, TOC, TIC, EC, AOC)
- Low maintenance and low operating costs
- Fully automated solids sampler for high sample throughput
- Durable design and long-living hardware components



AOX/EOX/POX/TX multi X 2500



The all-rounder for environmental monitoring

The multi X 2500 is a multi-talent in sum parameter analysis to be applied in many areas, from AOX/TOX, EOX, and POX monitoring in wastewater, sludge, and soil, TOC – important for wastewater analysis, to the determination of TX/TOX contents in challenging organic matrices. Benefit from a simple operation, unique application flexibility, and a high degree of automation. This directly results in reliable results and maximum sample throughput at minimal effort.

multi X 2500 at a glance:

- Broad range of applications – AOX, EOX, POX, TX/TOX, TOC sum parameters
- Both, vertical and horizontal sample feeding in one system
- High sample throughput and accurate measurement
- Low operating costs and maintenance effort



More information online
www.analytik-jena.com/multiea5100



More information online
www.analytik-jena.com/compeact



More information online
www.analytik-jena.com/multiea4000



More information online
www.analytik-jena.com/multix2500



TOC/TN_b Analysis

Our TOC/TN_b analyzers make your daily lab work easier. Proven technologies meet maximum ease of use and make your analysis simpler, more time-saving, and more profitable – whether for environmental monitoring of water or solids, or for pharmaceutical applications.



TOC/TN_b Analyzers multi N/C x300 Series



TOCnology made for you

The TOC/TN_b analyzers of the multi N/C x300 series will make your day-to-day laboratory routines easier. Unique technologies and an intuitive software will facilitate your workflows while delivering results fit for any interlaboratory study. Find the perfect match for your TOC/TN_b analysis.

The parameters TOC, NPOC, DOC, POC, TC, TIC, and TN_b can be measured easily, quickly, and without conversion in aqueous samples. Separate solid modules, such as the HT 1300, allow the catalyst-free, complete oxidation of solid samples at up to 1,300 °C in a robust ceramic combustion tube. The liquid autosamplers with integrated sample homogenization, automatic acidification and purging provide a high degree of automation for diverse requirements in TOC analysis. Time-optimized processes, such as parallel analyzing and purging in NPOC mode, can double the sample throughput.

multi N/Cx300 series at a glance:

- Long-term stable calibration of up to one year
- No dilution of samples with high TOC content
- Easy access to and quick replacement of consumables
- Loading of additional samples without interrupting ongoing measurements
- Automated liquid and solid analysis without hardware conversion
- No milling and wrapping of solid samples (sample quantities up to 3 g)
- Automatic acidification and purging of samples
- Unattended operation with complete peace of mind

multi N/C 2300 – the specialist: combustion device specializing in the analysis of particle-rich samples and small sample volumes

multi N/C 3300 – the allrounder: combustion analyzer optimized for high throughput and particle-rich, salt-containing or pure samples

multi N/C 4300 – the trace detector: sensitive and precise UV digestion device suited for ultra-pure water analysis



More information online
www.analytik-jena.com/tocnology

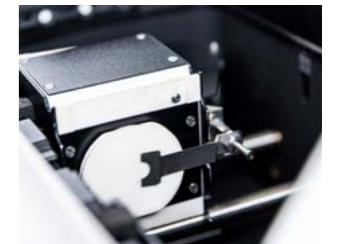


Molecular Spectroscopy

We offer robust, reliable, and sensitive UV/Vis instruments with double beam technology for a wide range of routine and special applications.



UV/Vis Spectrophotometers SPECORD PLUS Series



Maximum Precision in UV/Vis

The SPECORD PLUS series includes UV/Vis instruments of outstanding precision and reliability, intuitive operation with a user-friendly and powerful software, and a broad range of accessories. Whether routine analysis or complex applications, both UV/Vis novices and experts can easily achieve consistent and reproducible measurement results of highest quality. The SPECORD PLUS series offers the flexibility and ease-of-use to meet current and future analytical challenges.

SPECORD PLUS series at a glance:

- User-friendly – intuitive software, large sample chamber, easy exchange of accessories and lamps
- Versatile and flexible – extensive range of accessories for liquid, gaseous, solid, and powdered samples
- Powerful and reliable – high-precision optics for precise analysis also for low concentrated and turbid samples, 10-year long-term warranty
- Compliant to pharmacopoeias – hard- and software fully compliant to pharmacopoeias, special software module for FDA 21 CFR Part 11, Ph. Eur. and USP available

SPECORD 50 PLUS – double-beam photometer with split-beam technology

SPECORD 200 PLUS – double-beam photometer for the simultaneous measurement of sample and reference signals with fixed slit width

SPECORD 210 PLUS – double-beam photometer for the simultaneous measurement of sample and reference signals with an extended wavelength range from 185 to 1200 nm

SPECORD 250 PLUS – double-beam photometer for the simultaneous measurement of sample and reference signals with minimal scattered light due to the pre-monochromator

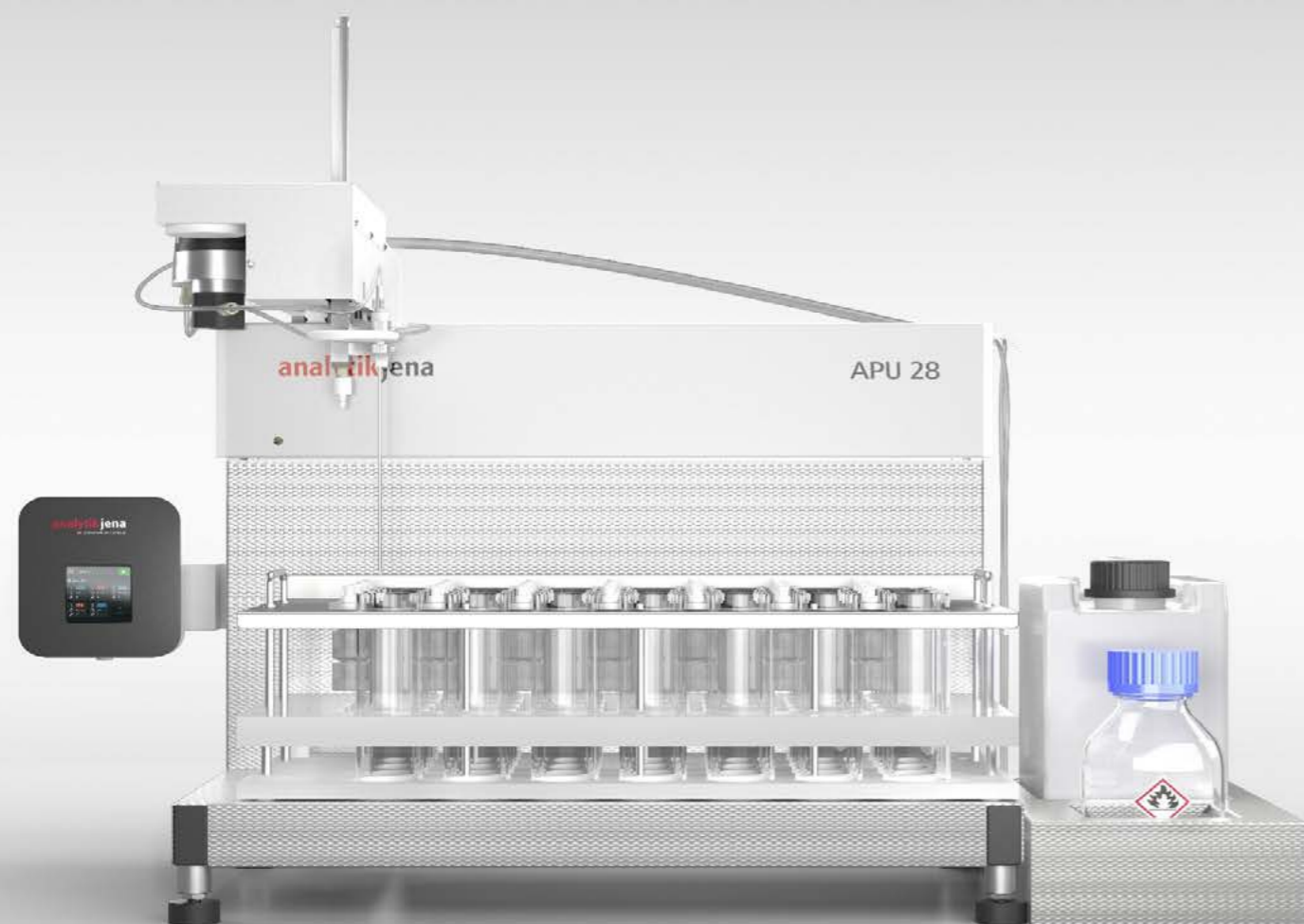


More information online
www.analytik-jena.com/specord



Sample Handling and Preparation

We offer reliable, high-performance solutions for sample handling and preparation – key steps for achieving accurate and reproducible analytical results. Our versatile systems streamline workflows and span a wide range of applications – from AOX and AOF sample preparation and microwave digestion to species separation by HPLC and automatic preparation of clinical samples for ICP-MS.



Sample Handling for ICP-MS

clinPAL Series



Automation that has your back

clinPAL stands for long-term, cost-effective and space-saving workflow automation. This unique solution enables a fully automated recognition, homogenization, dilution and introduction of clinical samples for ICP-MS analysis. Handle both high sample throughput and small volumes reliably and efficiently.

clinPAL at a glance:

- Efficiency – achieve optimal laboratory utilization
- Productivity – eliminate manual preparation steps and save valuable time, space and money
- Accuracy – obtain highly accurate results thanks to optimal and reproducible sample preparation
- Quality – avoid contamination thanks to a metal-free flow path and sample vessels remaining closed at all times

clinPAL 1200 – automated sample handling and preparation of up to 192 samples

clinPAL 850 – automated sample handling and preparation of up to 96 samples

Sample Preparation for IC and More

ICprep Series



Prep smarter, not harder

Discover the cost-effective entry into sample preparation for AOF analysis or halide speciation according to pyrohydrolysis with ICprep. Effortlessly prepare your samples for ion chromatography (IC) and other ion sensitive detection techniques while maximizing lab productivity with high throughput and streamlined workflows.

ICprep at a glance:

- Efficient – automate up to 100 samples in a sequence
- Stress-free – make your samples IC-ready with ease
- Budget-friendly – your entry into sample prep for AOF/EOF/TF or speciation of halides and sulfur
- Flexible – adapt to various standards and applications

ICprep automatic – automated preparation of up to 100 samples per sequence

ICprep basic – flexible sample preparation for small sample numbers



More information online
www.analytik-jena.com/clinpal



More information online
www.analytik-jena.com/icprep



AOX/AOF Sample Preparation

APU 28 connect, APU sim, AFU 3



Our systems help to minimize unproductive downtime and preparation effort, while increasing your throughput of AOX, AOF, and EOF samples and thereby remaining flexible and cost-effective.

APU 28 connect – Smart AOX and AOF sample preparation according to column method

APU 28 connect combines usability and speed in AOX and AOF sample preparation. The touch display offers intuitive operation with minimal effort and reduced programming time for any skill level. Parallel sample enrichment allows you to reduce the preparation time in your lab significantly. The highly durable components guarantee a long service life and enable 24/7 operation.

- Fast – automatic enrichment of up to 28 samples
- Smart – intuitive operation via touch display
- Flexible – wide range of applications: SPE-AOX, AOX and AOF column method



APU sim – ideal for small sample series

APU sim offers the simultaneous and fast enrichment of up to six AOX or AOF samples using the column method, or preparation of up to six water samples for EOF analysis. Each channel can be operated individually. Sample volume, wash volume, and flow rate are adjusted individually. The system stands out with excellent particle handling.

- Wide application range – AOX and AOF column method, SPE-AOX or EOF
- Cost-effective solution for small sample series
- High throughput speed – up to six samples prepared simultaneously
- Suitable for particle-containing and saline samples
- Column flexibility – utilization of versatile AOX and AOF column brands and sizes

AFU 3 – the versatile all-rounder

The system allows for semi-automated sample preparation of up to three samples according to batch and column method. It's an effective alternative to classical membrane filtration as using expensive polycarbonate filters is not necessary. The system can be extended easily for semi-automated preparation of up to three samples according to column method.

More information online
www.analytik-jena.com/aox-samplepreparation



Liquid Chromatography

PQ LC



Highly sensitive LC-ICP-MS solutions for the determination of elemental species

LC-ICP-MS is a versatile, robust, and highly sensitive method for the determination of element species in various sample matrices. The coupling of the PlasmaQuant MS with PQ LC offers outstanding precision and accuracy in elemental speciation. The combination of excellent chromatography and the high sensitivity of PlasmaQuant MS enables lowest detection limits for e.g., arsenic or chromium species.

PQ LC at a glance:

- Highly sensitive – lowest detection limits
- Inert – metal free flow path
- Flexible – system for individual adaptation to your requirements
- Intuitive – easy handling with up to four solvents

PQ LC – HPLC system, stainless steel
 PQ LC – HPLC system, non metal, PEEK

More information online
www.analytik-jena.com/pqlc



Microwave Digestion

speedwave XPERT



Sample preparation at the highest level

Microwave-assisted pressure digestion is used as a sample preparation technique for reliable elemental analysis in routine and research laboratories alike. speedwave XPERT is a universally applicable microwave digestion system for the preparation of organic and inorganic sample materials that impresses with its reliability, safety, and economy.

speedwave XPERT at a glance:

- Reliable digestions thanks to innovative sensor technologies
- Outstanding lifetime of vessels
- Maximum safety and unparalleled user comfort



More information online
www.analytik-jena.com/speedwave



Modular Service Contracts

The service contract that's a perfect fit: Enjoy a tailored service concept that exactly suits your needs. With all advantages from Analytik Jena's service: fast, friendly, personal, and competent.



Create your own service contract


You choose your device with the configuration you need. Why not your service contract too? Select the service modules you need and tailor your individual service package. Benefit from the flexibility of components and the full support of a strong service partner. For service as unique as your business.

Our contract modules

- **Repair & Maintain:** individual maintenance concept and all repairs during the contract period
- **Operational Qualification/OQ:** a functional qualification during the contract period
- **Preventive Maintenance:** inspection of equipment technology and peripherals according to protocol
- **Calibration:** temperature calibration of your thermal cycler
- **Application Training:** one applicative-methodological training plus consulting and troubleshooting for daily routines
- **Reaction Time:** Book a defined reaction time (72 or 48 hours). We guarantee to solve your case or to send a technical expert to your site within this period.

i Benefits of a modular service contract

- Customized – create the contract that is tailored to your needs
- Powerful – secure best performance and minimum downtime of your devices
- Cost efficient – plan your costs and pay only what you need
- Time-saving – secure efficient processes and minimal organizational effort
- Strong partner – enjoy competent personal service from the manufacturer

 More information online
www.analytik-jena.com/servicemodules



Your Partner in Life Science and Liquid Handling

In addition to our know-how in chemical analysis, the life science and liquid handling portfolio of Analytik Jena includes a wide range of products for automated and overall solutions for molecular biology.



Bundling expertise under one roof


Analytik Jena is dedicated to providing its customers with powerful systems throughout every phase of analysis. Its range of products includes sample preparation, liquid handling, robotics and standard and real-time PCR instruments. For those special requirements, we offer customized solutions and support to establish the workflow exactly to your needs. A number of instruments are defining new standards in their fields and are enjoying considerable prestige among users worldwide.

Life science

- More than 30 years experience in PCR thermal cycling
- Real-time PCR technology with ten years long-term warranty on patented optical components
- Reliable and precise quantitative and qualitative detection of nucleic acid

Liquid handling and automation

- Perfect liquid handling solution for daily pipetting routines
- From automatic simultaneous pipettors to laboratory robots
- All liquid handling systems can be tailored to your individual application, throughput and capacity requirements.
- Smart and collaborative laboratory bench automation

 More information online
www.analytik-jena.com/life-science



 www.analytik-jena.com/liquid-handling-automation



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Subjects to changes in design and scope of delivery as well as further technical development!