



TESTA Analytical Solutions

Polymer Characterisation
and Particle Sizing



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TESTA ANALYTICAL SOLUTIONS



The Company

TESTA Analytical Solutions e.K. was founded in 2014 in Berlin, Germany, where the administrative Worldwide Headquarter is still located today. Soon after, we established a Branch Office in Teltow, Germany with manufacturing facilities and lab space. Both locations offer the best possible logistics connections to both suppliers and clients.

TESTA Analytical Solutions is fully focused on providing cutting-edge products for the analysis and characterisation of polymers and particles. We manufacture a full range of high-performance GPC/SEC chromatography instruments based upon the latest technological innovations. We also supply and support Particle Sizing and Zeta Potential equipment from Brookhaven Instruments Corp., a company world renowned for its excellent quality and outstanding performance. Over the last 5 years, TESTA Analytical Solution has established itself as a preferred supplier to a growing number of European academic and industrial R&D institutions, and is increasingly installing systems in the QC/QS sectors as well.

Our Vision is to constantly and actively contribute to scientific progress by sharing our knowledge and providing the best tools for research.

Today, TESTA Analytical Solutions is widely recognised for its considerable know-how on the analysis and characterisation of polymers in solution and particles in dispersion. We pride ourselves in our ability to help clients solve their most challenging analytical problems or applications.

Fairness and honesty are the fundamental principles which govern all our operations.

TESTA Analytical Solution strategy is based on careful, organic growth with a specific focus on quality of products and services.



The Products

Here at TESTA Analytical Solutions we strongly believe that quality is not just defined by the instruments that we supply. Our ethos is to strive for continual improvement in the quality of the complete package of instrument, technical service and application support we provide to our customers.

Our product portfolio consists of two expanding ranges of products both based on the very same physical principles as defined by Einstein-Stokes and Flory-Fox. These two product ranges allow in depth investigation of wide-ranging polymer solutions and particle dispersions.

To enable you to investigate dissolved polymers we offer a full line of high-performance GPC/SEC chromatographic instruments and consumables. Chromatography is a powerful technology for determination of fundamental parameters ranging from Molecular Weight right through to structural information about branched macromolecules. Unlike many other suppliers, TESTA Analytical Solutions range of GPC/SEC equipment is specifically designed for polymer characterization and is therefore optimized to operate with all solvents used in GPC/SEC. This includes even the most challenging solvents such as DMF, HFIP, DMAc and DMSO as well as more common solvents like THF and aqueous buffers.

Our GPC/SEC range includes top performance MALS and Viscometer detectors and a unique Refractive Index / Viscometer combination detector which sets a new performance benchmark for structural investigation of complex polymers.

Particle Sizing and Zeta Potential determination are universally recognized as pillars of analysis of colloidal dispersions. Dynamic Light Scattering (DLS) is the most established technology for the size determination of nanoparticles from 0.3 nm up to 10 μm . TESTA Analytical Solutions offers a full range of instruments capable of covering the full range of applications, from routine QC analysis to the most challenging research tasks. All our particle sizing and zeta potential instruments combine outstanding performance with intuitive simple operation achieved through a software platform capable of fulfilling the most demanding requirements or when required the simplest operations.

OEM CAPABILITIES

Creating Innovative Technology To Improve Your Competitiveness

Backed by decades of experience, Testa Analytical has created a range of high-performance GPC/SEC detectors, GPC/SEC Pumps, accessories and software products customizable to meet your exact needs. Our team of knowledgeable technical and engineering staff are available to discuss your OEM needs and to provide seamless integration of our technology into your existing or new product.

Here are some examples of OEM projects we have undertaken:



Liquid Chromatography Flowmeter

TESTA Analytical has developed a new Flowmeter which enables continuous measurement of flow rate without interference in chromatography systems. Compatible with all HPLC and GPC/SEC solvents, the Flowmeter is conveniently sized and powers itself from a USB connection. A modern PC based App allows continuous recording and storage of the measured flow rates.



GPC/SEC Viscometer Kits

We are a leading supplier of high performance, high sensitivity GPC/SEC Viscometers. Our viscometer kits are proven to deliver benchmark performance in terms of sensitivity, stability and reliability. For many years we have supplied an optimised OEM variant of our viscometer kit to a leading global GPC/SEC instrumentation supplier. The quality of the viscometer products supplied exceeds even the most demanding expectations with a stunning failure statistic of ZERO since our partnership began.



Batch Mode dn/dc Refractometer

For all static light scattering applications - dn/dc or the specific refractive index increment is a crucial parameter for ensuring accurate and precise measurements of molecular weight. Developed and refined over many years our cutting edge dn/dc refractometer technology has been supplied as a critical component detector to an international leader in the Light Scattering field.



Rapid Scanning UV Detector Kit

Concentration detection using UV absorption is one of the oldest and most trusted methods in analytical chemistry. It has found wide application in chromatography instrumentation and increasing finds use in process applications. Approached by a company that delivers cutting edge technology solutions for control and optimization of polymerisation processes, we worked closely with the client to adapt our Rapid Scanning UV Detector to their exact needs. The resultant Rapid Scanning UV Kit has underlined its reliability integrated into our customers product even under harsh process conditions where it delivers the required data with impressive precision and accuracy.



Differential Refractive Index (DRI) Detector Kit

Determination of concentration of samples which do not show absorption in the UV Range can be accomplished by using a differential refractive index detector (DRI). For Process Applications however, standard DRI's lack the dynamic range required to measure sample concentrations that are typically higher than in common analytical tasks. A number of years ago we developed a DRI kit designed specifically to target this task. An adapted version of this kit has helped increase the market penetration of a company supplying cutting edge technology solutions for control and optimization of polymerisation processes. For this customer our DRI kit has proven itself in many installations to reliably measure target analytes over a wide range of concentration in a tough process environment with the highest reliability and accuracy.



Differential Viscometer - Refractive Index GPC/SEC detector combo

Our Combination Viscometer - Refractometer sets a new standard for the detection of intrinsic viscosity of highly diluted samples. The Refractometer is integral part of the viscometer, therefore both concentration and viscosity are measured at exactly the same time on the very same sample segment. The Combo allows a much more accurate determination of molecular parameters and is particular suited for those application focused on the structure and branching of the investigated polymer.



As a dynamic company we are constantly investing in research and development to adapt and improve upon existing and emergent chromatographic technologies to develop 'new kits' that we can adapt to optimally suit your needs.

The specific details of all OEM supply projects we are involved with are treated as company confidential. We welcome your OEM enquiries by [clicking here](#) or calling us on +49 30 864 24 076 for a free, no-commitment discussion.

GPC/SEC CHROMATOGRAPHY EQUIPMENT

Differential Refractive Index (DRI) Detector

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BI-MwA Multi-Angle Light Scattering detector (MALS)

Quickly, easily, and accurately determine absolute molecular weights of proteins and polymers. Eliminate SEC/GPC column calibration and improve data quality. Rapidly reduce uncertainty with no assumptions required and true extrapolation to zero angle. Best of all, the BI-MwA has the highest performance/price ratio of any light scattering detector used for molecular weight determination.



Differential Viscometer GPC/SEC detector

Within a GPC/SEC Chromatography system, a viscometer allows use of a universal calibration. Molecular weights obtained with this method are therefore independent of the polymer standards used to build the calibration and can be considered to be close to absolute values. Also, a viscometer will allow determination of further molecular parameters giving insight about the physical structure of the investigated polymer and even opening the gate to determination of branching parameters...



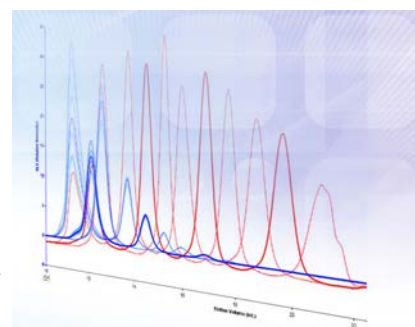
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ParSEC Advanced GPC/SEC Software

ParSEC is a powerful new suite of software for multi detector, macromolecular characterization and represents the most significant development in GPC/SEC analysis. ParSEC is compatible with ALL GPC/SEC systems and detectors. Many attractive and practical features have been written into the new software for the benefit of chromatographers, including "function specific" views...



ReadyCal Polymer Standards

GPC/SEC Chromatography is impossible without Polymer Standards. For QC Applications which mostly uses a single concentration detector, Polymer Standards are required for Calibration of the Columns which then allows calculation of Molecular Weights. More complex GPC/SEC Systems with Viscometers and MALS, require Polymer Standards for the determination of Instrument Constants and for System Validation...



PARTICLE SIZING INSTRUMENTS

NanoBrook Omni

Brookhaven's NanoBrook Omni instrument combines the best technology from our particle/protein sizer and zeta potential analyzer in to one powerful and accurate solution for sizing and zeta potential analysis. Measure samples in nearly every possible suspension environment from high salts such as PBS and sea water to organic solvents and of course aqueous solutions...



NanoBrook 173Plus

Brookhaven's NanoBrook 173Plus instrument is the go-to-solution for characterization of proteins, antibodies, nanoparticles, macromolecular assemblies and other molecules/particles of small sizes. The NanoBrook 173Plus uses backscattering detection for the highest sensitivity and accuracy optimized for molecules and particles less than a few tens of nanometers...



NanoBrook 173

Brookhaven's NanoBrook 173 instrument is the go-to-solution for characterization of proteins, antibodies, nanoparticles, macromolecular assemblies and other molecules/particles of small sizes. The NanoBrook 173 uses backscattering detection for the highest sensitivity and accuracy optimized for molecules and particles less than a few tens of nanometers...



NanoBrook 90Plus

The NanoBrook 90Plus particle size analyzer incorporates all you need for fast, routine, sub-micron measurements. Based on the principles of Dynamic Light Scattering (DLS), most measurements only take a minute or two. Choose the optional avalanche photo diode (BI-APD) for weak scatters. The instrument can be upgraded later on to include zeta potential measurement...



BI-DCP Centrifuge

The Brookhaven BI-DCP is a digitally controlled, high resolution, particle size distribution analyzer. It yields high resolution results in the size range from 0.01 to 30 microns with typical analysis times ranging from 5 to 30 minutes. The DCP software provides easy instrument control, data analysis, and database management. The software is menu-driven and permits a variety of report formats...



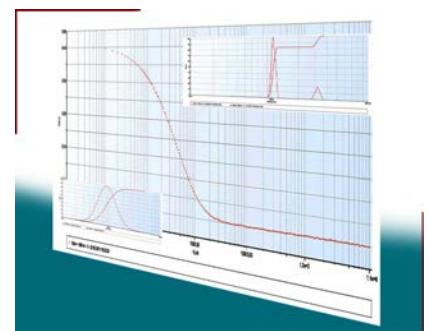
BI-XDC X-Ray Disc Centrifuge

Based on first principle, the BI-XDC is the only X-Ray disc centrifuge that measures particle size without calibration or absorption correction. The high resolution instrument can resolve peaks as close as a 15% size differential and quantify distribution accurately. Homogeneous start with scanning head makes for quick measurements...



Particle Solution Software

Designed to operate with NanoBrook series particle characterisation instruments, Particle Solutions software suite integrates characterisation of 5 different particle measurement technologies - DLS, SLS, Phase Analysis Light Scattering (PALS), micro-Rheology and Molecular Weight Determination in one package. The new version of this popular software suite for NanoBrook...



ZETA POTENTIAL EQUIPMENT

NanoBrook Omni

Brookhaven's NanoBrook Omni instrument combines the best technology from our particle/protein sizer and zeta potential analyzer in to one powerful and accurate solution for sizing and zeta potential analysis. Measure samples in nearly every possible suspension environment from high salts such as PBS and sea water to organic solvents and of course aqueous solutions...



NanoBrook 90Plus ZETA

Brookhaven's NanoBrook 90Plus Zeta instrument combines our NanoBrook 90Plus and NanoBrook ZetaPlus instruments into one versatile package for routine sizing and zeta potential analysis. It employs Dynamic Light Scattering (DLS) for particles/molecules size and Electrophoretic Light Scattering (ELS) for particles/molecules surface charge evaluation...



NanoBrook 90Plus PALS

Brookhaven's NanoBrook 90Plus PALS instrument combines our NanoBrook 90Plus and NanoBrook ZetaPALS instruments in to one powerful package for sizing and zeta potential analysis. With over a decade of proven records in diverse applications, Brookhaven's pioneer Phase Analysis Light Scattering (PALS) technology remains a step ahead of the competition...



NanoBrook ZetaPALS

For measurements of very low mobilities, the NanoBrook ZetaPALS is the answer. The only answer! With concepts developed at Bristol University and Brookhaven Instruments, the NanoBrook ZetaPALS determines zeta potential using Phase Analysis Light Scattering: A technique that is up to 1,000 times more sensitive than traditional light scattering methods based on the shifted frequency spectrum...



Nanobrook ZetaPlus

The NanoBrook ZetaPlus is the simplest and most accurate particle electrophoresis system available. This revolutionary instrument has been designed to eliminate the short coming inherent in other zeta potential instruments. The ZetaPlus software is simple and intuitive to operate but yet offers flexibility and a full range of means for those that wish to tune their experiments to specific circumstances...



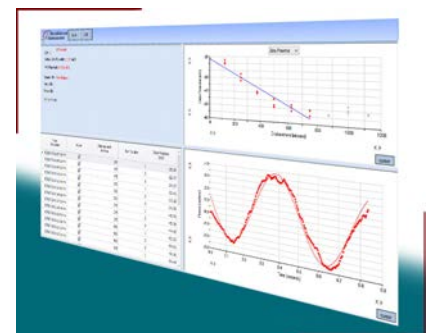
BI-ZTU Autotitrator

The BI-ZTU, autotitrator option for the NanoBrook zeta potential analyzers is ideal for automatic determination of the isoelectric point, the IEP, of colloidal materials. Four pumps provide unparalleled flexibility for optimizing reagent use. The dramatic savings of reduced labor costs will also encourage larger scale studies that will produce more valuable results...



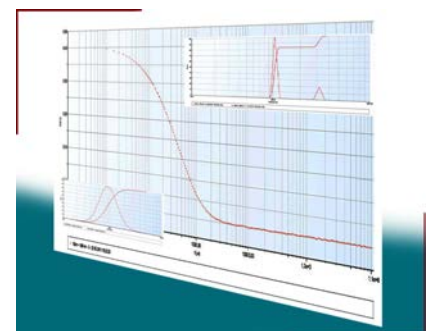
Surface Zeta Potential Electrode

The Surface Zeta Potential feature allows the user to measure the electrical charge on materials like coated glass, plastic, tape, or other flexible surfaces. A series of measurements are taken on probe particles at different distances from a surface and the Surface Zeta Potential is calculated as shown above...



Particle Solution Software

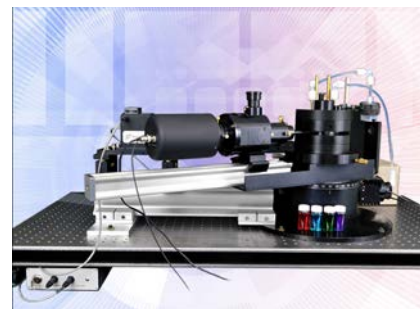
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RESEARCH GRADE LIGHT SCATTERING GONIOMETER

BI-200SM Goniometer System

With a Brookhaven Instruments BI-200SM Research Goniometer System this rich field of exploration is open to you for studies of both Static Light Scattering (SLS) and Dynamic Light Scattering (DLS). The BI-200SM Research Goniometer System provides access to all of these studies with an automatic, modular and versatile system. It is a precision instrument designed for exacting scattering measurements...



Particle Explorer Software Suite

Particle Explorer Software for the 200SM Goniometer System for DLS and SLS experiments...



Differential Refractive Index (DRI) Detector - Batch Mode

At the core of the HK Series Multi-Detector GPC/SEC platform is an outstanding concentration detector – our popular Differential Refractive Index (DRI) detector. Equipped with a monochromatic light source at 640 nm wavelength it perfectly matches the wavelength of the MALS detector. The DRI delivers highly accurate concentration and dn/dc values.



BI-MwA Multi-Angle Light Scattering detector (MALS)

Quickly, easily, and accurately determine absolute molecular weights of proteins and polymers. Eliminate SEC/GPC column calibration and improve data quality. Rapidly reduce uncertainty with no assumptions required and true extrapolation to zero angle. Best of all, the BI-MwA has the highest performance/price ratio of any light scattering detector used for molecular weight determination.



Staying In Touch with TESTA Analytical

Our fully searchable website is designed to enable visitors to rapidly locate information relevant to their interest. Online resources including instructional videos, informative guides and a growing library of technical articles / interviews / application notes make www.testa-analytical.com well worth bookmarking for regular visits.

[GO TO WEBSITE](#)

For instrumentation companies looking for an OEM partner to develop a speciality detector or system we have a dedicated website - <https://oem.testa-analytical.com/> that is also regularly updated with new content.

[GO TO WEBSITE](#)

Information on both these websites can be readily shared using social media or email forwarding tools.

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