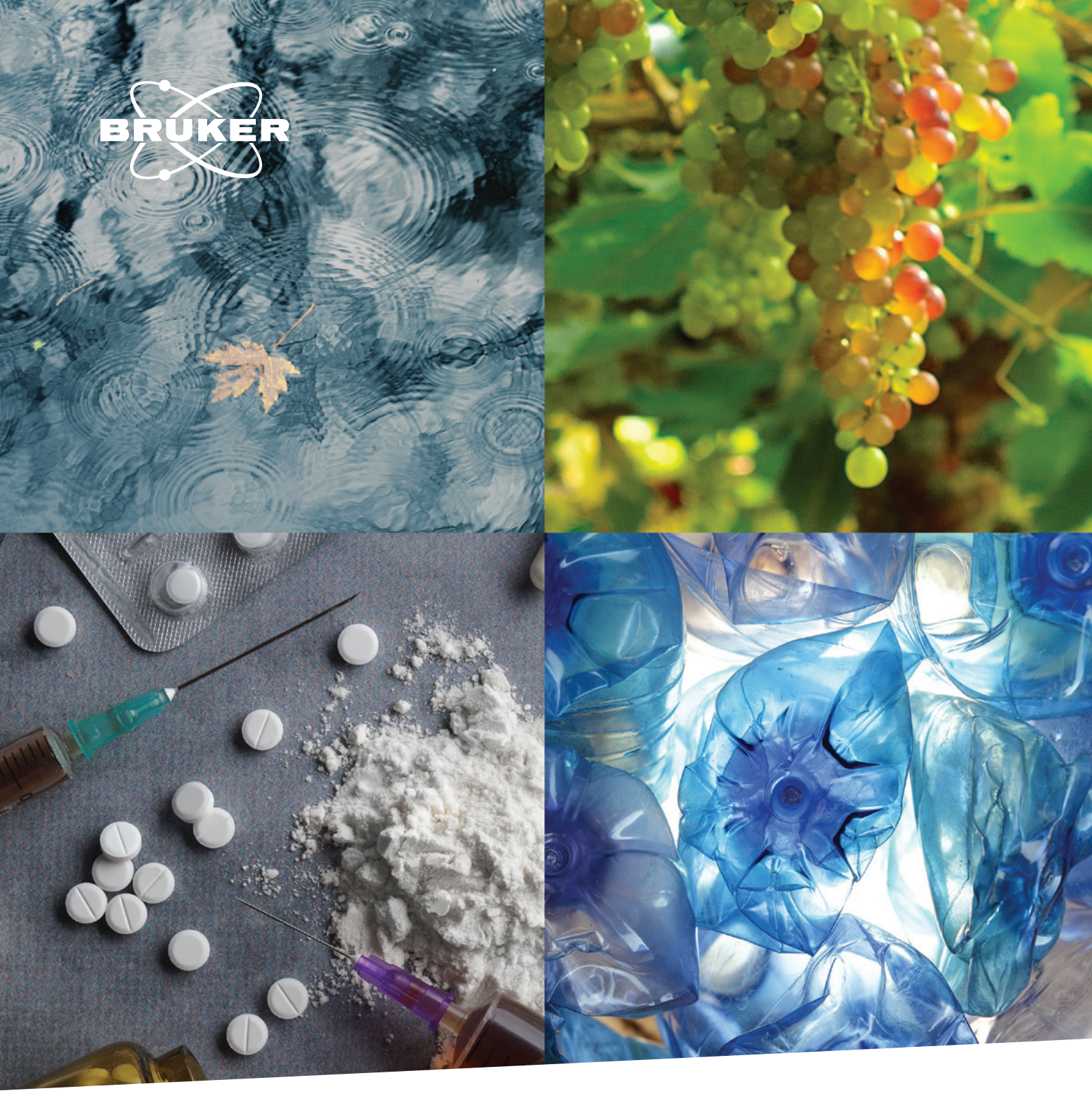


Empowering Technology – Improving Life

Bruker Applied Mass Spectrometry

Innovation with Integrity

Highly Differentiated Solutions

Bruker's Unique Workflows and Solutions are the Measure of Innovation

Set a new standard: Tackle challenging problems, accelerate insights, increase efficiency and productivity through outstanding performance.

Screen swiftly, validate quickly, report confidently

Bruker Applied Mass Spectrometry is advancing the migration of technology from research to commercial laboratory. The latest product lines reflect this design philosophy to solve the challenges faced by the analysis community in applied markets. We invite you to take a closer look and learn how our products and solutions will transform workflows in environmental, food, forensics, clinical research, and industrial analysis.

Empowering applied markets with innovation and integrity

As one of the world's leading analytical instrumentation companies, Bruker offers a broad spectrum of advanced workflows and solutions for all fields of applied markets. Our dependable systems and elegant solutions are designed to improve application workflows, streamlining sample to report. Efficient workflows and economical solutions only improve productivity when every instrument and process are engineered and validated to be robust, reliable, and simple to use. Bruker's systems are expertly designed for performance and utility and feature unique capabilities and technologies to improve sample throughput, enhance data quality and facilitate data mining and reporting allowing you to smoothly go from sample to results all day, every day.

High performance, easy-to-use, expertly supported

From environmental, food, forensics, clinical research, and industrial research laboratories to routine contract labs, Bruker has been driving innovation in analytical instrumentation and solutions for more than 60 years. Today, over 8,500 Bruker employees are committed to providing scientists with the very best in innovative mass spectrometry and reliable analytical solutions. Recent advances in Bruker's mass spectrometry product lines make this analytical power more accessible than ever to both new and expert users. Working worldwide in more than 70 locations across all continents, Bruker's Sales, Service, and Applications teams will assemble your optimal solution or workflow so that your sample analysis is effective, efficient, and cost-effective and your data results are precise, accurate, and conclusive.

Triple Quadrupole Mass Spectrometry Systems

Bruker's EVOQ® TQ systems set a new standard of performance

Triple quadrupole MS systems are the backbone of many routine analytical and contract research laboratories. Successful, sensitive screening and quantitation for diverse compounds across a broad range of applications, including the screening of foodstuffs, environmental hazards, and forensic toxicology studies, require high performance instrumentation. Bruker's EVOQ TQ systems are designed and built to provide reliable, versatile, easy-to-use power on any laboratory benchtop. And now with chromatography-free workflows using Direct Analysis in Real-Time (DART), sample analysis is easier, faster, more cost effective, and greener than traditional triple quadrupole LCMS.

EVOQ Triple Quadrupole Mass Spectrometry

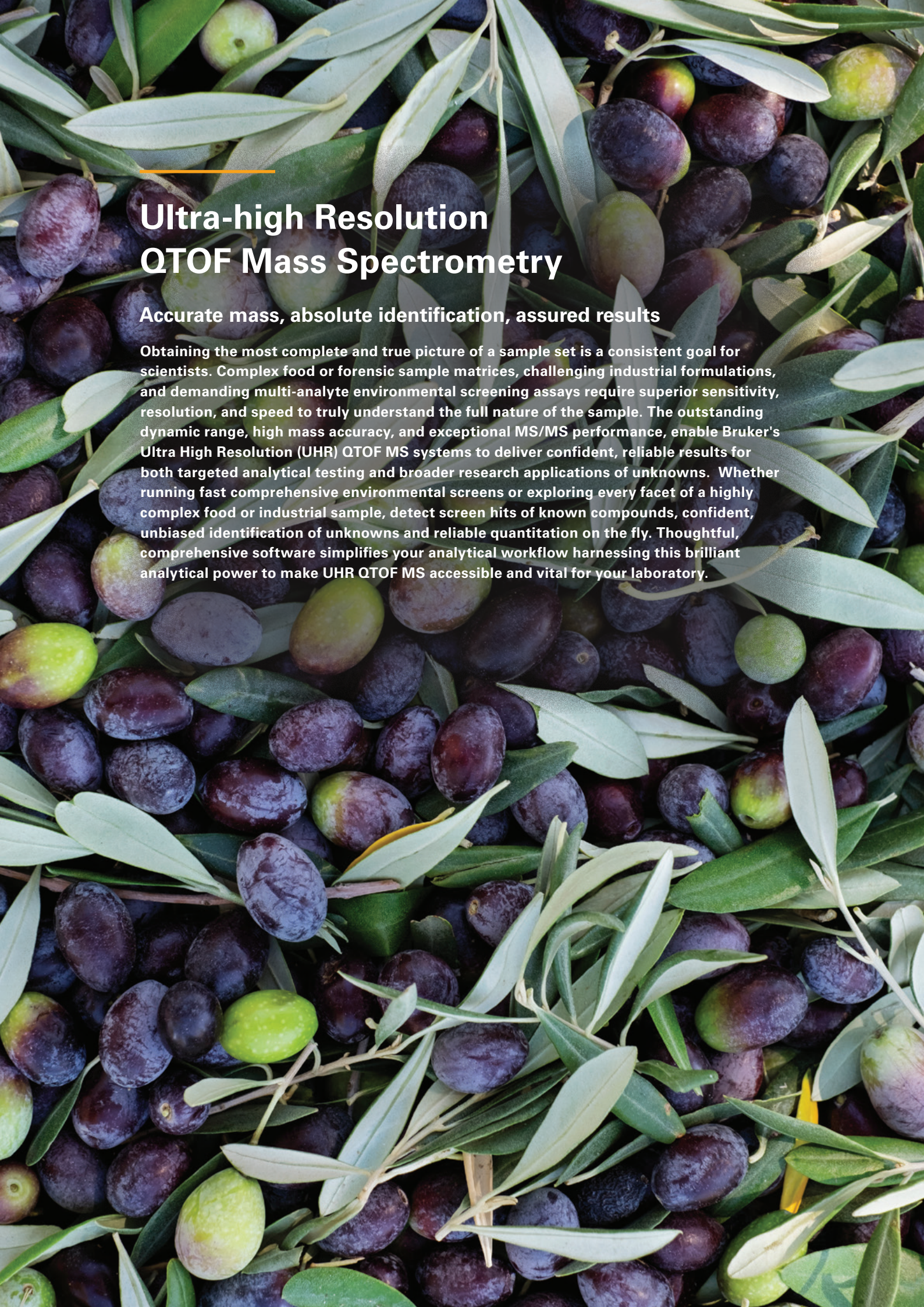
EVOQ TQ MS systems provide analysts with an MS platform designed for a singular purpose – to reliably quantify thousands of target analytes from real samples in the fastest sample-to-report time possible. These systems deliver exceptional sensitivity, precision, accuracy, and linearity over a wide dynamic range for your multiple reaction monitoring (MRM) assays. Innovations in software and atmospheric pressure ionization (API) technology make it a game changer for routine high-sensitivity, quantitative analysis. At Bruker today, we are leading the migration of technology from research to commercial laboratories. The EVOQ TQ systems reflect this design philosophy and solve the hardware and software challenges faced by the quantitative analysis community.

	EVOQ TQ		
	Elite	**Elite ER**	**DART-TQ+**
mass range:	10-1,250	10-2,000	10-1,200
size [mm]:	600 x 470 x 810	600 x 470 x 810	580 x 400 x 860 DART plus motor rail: 580 x 610 x 980
source:	VIP-HESI, APCI, DART	VIP-HESI, APCI, DART	VIP-HESI, APCI, integrated DART
MRM per second:	600	600	1,000
scan rate:	Up to 20,000 Da/sec	Up to 20,000 Da/sec	Up to 30,000 Da/sec

EVOQ Gas Chromatography – Triple Quadrupole Mass Spectrometry

EVOQ GC-TQ Speed MS systems set a new industry standard for GC-MS/MS performance and productivity. With their unique 'lens free' elliptical ion path design and novel high-speed electronics, the EVOQ GC-TQ Speed systems deliver incredible sensitivity and high stability along with reduced chemical noise and unprecedented speed. This analytical power is simple to use and comes complete in a spacesaving package that makes upgrading to new levels of robust and reliable performance straightforward and cost-effective.

EVOQ GC-TQ SPEED	
mass range:	10-1,200
size [mm]:	450 x 280 x 570
MRM per second:	1,000
scan rate:	Up to 30,000 Da/sec



Ultra-high Resolution QTOF Mass Spectrometry

Accurate mass, absolute identification, assured results

Obtaining the most complete and true picture of a sample set is a consistent goal for scientists. Complex food or forensic sample matrices, challenging industrial formulations, and demanding multi-analyte environmental screening assays require superior sensitivity, resolution, and speed to truly understand the full nature of the sample. The outstanding dynamic range, high mass accuracy, and exceptional MS/MS performance, enable Bruker's Ultra High Resolution (UHR) QTOF MS systems to deliver confident, reliable results for both targeted analytical testing and broader research applications of unknowns. Whether running fast comprehensive environmental screens or exploring every facet of a highly complex food or industrial sample, detect screen hits of known compounds, confident, unbiased identification of unknowns and reliable quantitation on the fly. Thoughtful, comprehensive software simplifies your analytical workflow harnessing this brilliant analytical power to make UHR QTOF MS accessible and vital for your laboratory.

ESI QTOF

Bruker's compact, impact II VIP and maXis II QTOF mass spectrometers are the showcase instrument platform for sample characterization and screening applications involving the analysis of both targeted and non-targeted compounds in complex matrices. Built to last with minimum maintenance efforts, these systems provide the highest QTOF mass accuracy, sustained sensitivity, and enduring signal stability for cutting-edge performance in one-shot analysis. The dynamic source configuration offers extensive analytical versatility to cover all sample types from environment, food, and forensics all the way through various industrial markets.

TargetScreener HR – get the full picture

Environmental, food safety, and forensic toxicology laboratories need tools to rapidly screen for target compounds in complex samples with accuracy and certainty. Bruker's workflow offers several benefits including providing data-independent acquisition and all ion fragmentation data, enabling the analysis of an unlimited number of compounds, and allowing retrospective analysis. TargetScreener HR encompasses all these features. TargetScreener HR represents the modern way of monitoring: beyond obligatory testing, towards a complete picture to avoid surprises and headaches. It enables comprehensive screening, targeted and non-targeted, with minimized false positive and false negative reporting for accurate and precise quantitation meeting stringent regulatory guidelines.

	compact	impact II VIP	maXis II
resolution:	30,000	60,000	80,000
scan speed:	1-50 Hz (MS & MS/MS)	1-60 Hz (MS & MS/MS)	1-50 Hz (MS & MS/MS)
fragmentation:	CID	CID	CID, ETD
source:	All systems can have VIP-HESI, APCI, APPI, GC-APCI, DIP, CaptiveSpray, and DART		
size [mm]:	950 x 640 x 1320	1180 x 640 x 1980	1320 x 800 x 2900

Trapped Ion Mobility Mass Spectrometry

Next generation ion mobility separation with high sensitivity and robustness

The trusted family of powerful UHR QTOF systems are supercharged with the revolutionary advantage of the timsTOF systems, providing critical sample details by adding ion mobility to speed and sensitivity. Ion mobility is a powerful extension to mass spectrometry that delivers information about the three dimensional structure of an ion, increases peak capacity as well as provides orthogonal selectivity for absolute confidence in compound characterization.

timsTOF series

timsTOF represents the most recent and most efficient generation of ion mobility mass spectrometry. Trapped ion mobility spectrometry (TIMS) unlocks an additional dimension of separation and delivers revolutionary improvements in enhanced specificity and high sensitivity. The timsTOF Pro 2 with Parallel Accumulation Serial Fragmentation (PASEF®) technology enables fast scanning speeds, unlocking compound identification and quantitation of thousands of analytes. Simply handle isobaric species and chemical isomers for the ultimate in-depth sample analysis. No matter the industry or applied market application, easily rid problematic chemical interferences to focus on your compounds of interest for the clearest results.

TargetScreener 4D – one workflow – all the answers

TargetScreener 4D adds Collision Cross Section (CCS) values from ion mobility as a new dimension of orthogonal selectivity to the proven criteria from HRMS for rapid screening and quantitation of target compounds in environmental, food, forensic, and clinical research studies. It unlocks and eliminates all uncertainties of the sample analysis and generates ultimate confidence in compound identification. The TargetScreener 4D analytical workflow is designed to work directly “out of the box”. Using the combination of innovative hardware, high-quality data, sophisticated database, and comprehensive, powerful software generating reliable, conclusive results, sample to report has never been more straightforward.

timsTOF series

	Pro 2	fleX	fleX with MALDI-2
resolution:		60,000	
scan speed:	1->100 Hz (MS & PASEF)	1->100 Hz (MS & PASEF)	1->100 Hz (MS & PASEF)
acquisition:	PASEF	PASEF	PASEF
source:	ESI	ESI and MALDI smartbeam 3D	ESI and MALDI smartbeam 3D
size [mm]:	980 x 1400 x 2570	980 x 1400 x 2570	980 x 1400 x 2570
MALDI mode (rel. intensity):		1 (Cholesterol) 1 (Vitamin D)	>200 (Cholesterol) >1000 (Vitamin D)

MALDI-TOF and TOF/TOF Mass Spectrometry

Bruker's flagship FLEX series is the global leader for MALDI applications

Bruker's FLEX series is the absolute market leading MALDI platform. With its fully trusted innovative design, the FLEX series sets the precedent for outstanding MALDI performance, reliability, and convenience. Covering a broad range of applications from additive analysis to surface imaging, the benchmark FLEX series MALDI systems are the standard for polymer analysis. These MALDI systems include a wide range of capabilities enabling beginners and experts to achieve maximum efficiency.

Highly automated workflows enable data acquisition and in-depth analysis from the smallest amounts of samples within seconds. Intuitive and powerful software packages support data visualization and turn-key target characterization.

microflex series

From small molecules to polymers, the bench-top smartflex® and microflex® LRF are the perfect choice. The robust design guarantees reliable daily operation for chemical synthesis checks, lubricant quality control, additives analysis, and food adulteration analysis. Ideal for non-expert users and busy multi-instrument labs where ease-of-use, intuitive operations, and reliability are critical.

While microflex LRF provides expanded capabilities for smaller molecules due to the reflector mode, the smartflex with patented smartbeam laser provides extended lifetime for high-throughput applications.

autoflex maX series

Performance-leading MALDI-TOF and TOF/TOF technology enables reliable, detailed characterization of polymers and industrial synthetic chemicals. Smartbeam-II laser technology delivers superior spectral data quality with minimized sample preparation. The field-upgradable autoflex® maX is available in linear, high resolution reflectron or TOF/TOF versions spanning applications from dyes, pigments, and colorants to cutting edge polymer applications. The TOF/ TOF versions employ LIFT and high energy CID for fast, sensitive MS/MS experiments to yield chemical structural information of the precursor molecule benefiting polymer recycling and upcycling applications.

microflex LRF/smartflex	
resolution:	15,000 (LRF)
mass range:	up to 500,000
mass accuracy:	15 (int. calib.) [ppm] (LRF)
laser:	Nitrogen/smartbeam
size [mm]:	510 x 680 x 1350
laser frequency [Hz]:	60/200 (MS)

autoflex maX [LIN, LRF and TOF/TOF]		
resolution:	26,000	
mass range:	up to 500,000	
mass accuracy:	2 (int. calib.) [ppm]	
laser:	smartbeam II	
size [mm]:	825 x 1920 x 750	
laser frequency [Hz]:	LRF	TOF/TOF
	2,000 (MS)	2,000 (MS) 200 (TOF/TOF)

ultrafleXtreme

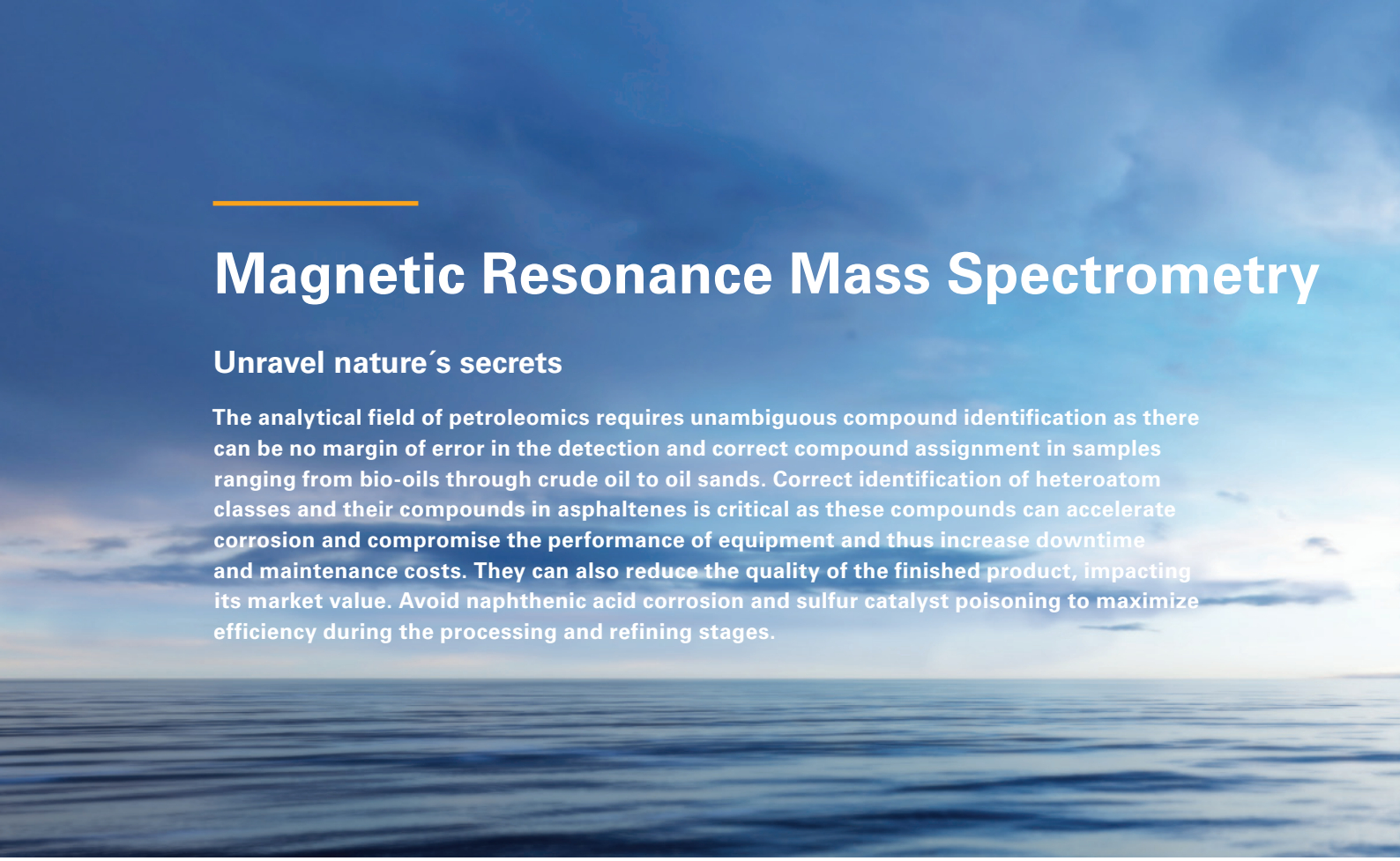
With increased resolution, larger mass range, enhanced dynamic range and patented smartbeam-II laser, the ultrafleXtreme provides outstanding MS and MS/MS spectral quality empowering polymer analysis. Unique PAN technology maintains the highest mass resolution across a very wide mass range to enable precision polymer analysis from average molecular weight determination, to dispersity and degree of polymerization analysis, and determination of end groups too. A highly extended MALDI laser lifetime in combination with automated laser-based source cleaning in just minutes leads to high uptime and minimum maintenance costs.

rapifleX series

The rapifleX® series is the most advanced and adaptable MALDI TOF(/TOF) system available. The rapifleX series combines state-of-the-art technology with advanced informatics into a system that gives you speed, robustness, and versatility. The mass resolving power of up to 50,000 and increased dynamic range provides confident determination in MALDI-TOF/TOF applications such as polymer end group analyses. With smartbeam 3D technology, MALDI MS and MS/ MS are up to 10 times faster for definitive polymer characterization and the ultimate in polymer deposition analysis. Adaptable ion optics allow for the best MALDI sensitivity in MS and MS/MS modes.

ultrafleXtreme TOF/TOF	
resolution:	40,000
mass range:	up to 500,000
mass accuracy:	1.5 (int. calib.) [ppm]
laser:	smartbeam II
size [mm]:	784 x 1332 x 2300
laser frequency [Hz]:	2,000 (MS) / 1,000 (TOF/TOF)

rapifleX [LRF and TOF/TOF]		
resolution:	50,000	
mass range:	up to 500,000	
mass accuracy:	1 (int. calib.) [ppm]	
laser:	smartbeam 3D	
size [mm]:	950 x 800 x 2750	
optional:	autoloader	
laser frequency [Hz]:	TOF	TOF/TOF
	10,000 (MS)	10,000 (MS)& (TOF/TOF)



Magnetic Resonance Mass Spectrometry

Unravel nature´s secrets

The analytical field of petroleomics requires unambiguous compound identification as there can be no margin of error in the detection and correct compound assignment in samples ranging from bio-oils through crude oil to oil sands. Correct identification of heteroatom classes and their compounds in asphaltenes is critical as these compounds can accelerate corrosion and compromise the performance of equipment and thus increase downtime and maintenance costs. They can also reduce the quality of the finished product, impacting its market value. Avoid naphthenic acid corrosion and sulfur catalyst poisoning to maximize efficiency during the processing and refining stages.

With Bruker's MRMS technology, multimillion resolving power delivers unrivaled sub-ppm mass accuracy over a wide mass range to reach incredible new analytical heights. Use this power on oil sands process-affected water (OSPW) to determine the origin of potential contaminants in tailings ponds and improve environmental monitoring and remediation.

Emerging work on biofuels, batteries, catalysts, or new generation energy storage technologies can be accelerated with detailed MRMS analysis. With MRMS, you'll decipher chromatographically unresolvable questions and routinely generate conclusive answers to your analytical challenges.

scimaX MRMS

Bruker‘s ground-breaking inventive superconducting magnet technology is the basis of the smaller footprint scimaX® MRMS system. This key innovation uses conduction-cooled 7T technology, which removes the requirement of liquid cryogen fills or quench ducts. The instrument comes standard with 2xR and Absorption Mode Processing (AMP) technology which means you have performance rivaling high field MRMS at your fingertips.

solariX MRMS

This workhorse platform for high-field MRMS work (12T and 15T) is built for ultra-complex mixture analysis requiring larger field strengths, such as petroleomics and dissolved organic material. These instruments feature long liquid cryogen (LHe) hold time with 1 year fill intervals as regular maintenance.

scimaX MRMS

solariX MRMS

MRMS

	scimaX	solariX 7T	solariX 12T and 15T
maximum resolution:	> 20,000,000	> 10,000,000	> 10,000,000
mass accuracy (internal):	600 ppb	600 ppb	300 ppb (12T) 250 ppb (15T)
liquid cryogen annual maintenance:	NO	YES	YES
quench duct requirement:	NO	YES	YES

Liquid Chromatography

Access to the widest variety of HPLC systems

Chromatographic separation is critical in many sample analysis workflows, and its value, analytical depth, and versatility are amplified dramatically when coupled to MS systems. Bruker's Compass HyStar is a state-of-the-art software solution for configuring and controlling hardware for these hyphenated techniques. Compatible with HPLC systems from many vendors, HyStar fully integrates LC-MS and GC-MS data collection. Subsequent data processing and report generation can be specific to a given workflow, including necessary quantitation, target identification, and screening tasks.

Elute PLUS LC Series – ultimate precision

Elute LC systems are built with intelligent novel flow control algorithms to deliver robust and precise gradients regardless of solvent compressibility, pressure, and flow rates. Elute PLUS LC systems incorporate self-priming and self-purging capabilities through the built-in pump, offering a simple and fast exchange of mobile phases and avoiding any leaks associated with manual operations.

The unique feature of automatic solvent compressibility measurement compensates for flow pulsation and flow rate reduction caused by solvent compression. This principle makes it easy to maintain and transfer LC methods. Additionally, the column switch (up to six) option provides great flexibility for routine labs, allowing the analysis of different sample types during overnight LC-MS runs for greater productivity.

Elute PLUS

	UHPLC	OLE	HT
flow range:	1 - 5,000 µL/min	1 - 5,000 µL/min	1 - 5,000 µL/min
pressure limit:	1,300 bar	1,300 bar	1,300 bar
carryover:	≤0.001%	≤0.001%	≤0.004%
size [mm]:	690 × 500 × 610	690 × 650 × 610	550 × 1,180 × 500
additional information:	Faster and high resolution separations	Combine the advantages of UHPLC and online liquid exraction	UHPLC combined with PAL3 autosampler for high sample throughput

Ion Sources

Cover the full spectrum of analytes

Bruker's mass spectrometry systems support a wide range of source options, perfectly suited for any kind of sample.

DART

Direct Analysis in Real-Time (DART) is a rapid and efficient ionization for mass spectrometry for measuring a wide range of analytes - solids, liquid, and gases. Operating at ambient pressure, DART can be used in the lab or in the field to get answers, when and where required. DART enabled chromatography-free workflows ramp up throughput and versatility with a simple, efficient workflow to improve productivity. Needing just a few seconds a sample, easily raster through a 384 well plate in less than 25 minutes.

Integrated DART

The integrated DART source takes chromatography-free workflows to a whole new level of operational simplicity. Complete with the same capabilities as the original DART source and full software control from a single user interface, increasing sample throughput while reducing operational cost is easy. Since all the gas and electrical connections are integral, changing from the integrated DART to VIP-HESI source is quick. Rapidly screen your samples with DART and then simply switch to VIP HESI for traditional LCMS validation making your lab more productive.

VIP-HESI

The VIP-HESI source generates a higher sensitivity for a broad range of analytes. The vacuum insulated probe (VIP) enhances electrospray ionization efficiency while minimizing thermal degradation of analytes. Matrix is rapidly and efficiently removed from the source via an active exhaust for sustained sensitivity maximizing system robustness with minimal maintenance. The VIP-HESI source also has the capability to switch to APCI mode used for less polar molecules often encountered in environmental, food, and industrial applications.

APPI II

Atmospheric Pressure Photo Ionization is used for less polar or non-polar molecules that cannot be ionized by ESI or APCI. APPI II is the only APPI source in the marketplace with DirectProbe (DIP) option for direct analysis of solid samples.

GC-APCI II

The GC-APCI II source with a unique flexible heated transfer line and calibrant delivery enables GC coupling to any Bruker TOF, QTOF, or MRMS system originally designed for LC coupling. Changing and setting up for GC-APCI is easier and more straightforward than ever — functional, fast every time.

Software Solutions

Compass and additional informatics

Maximum information, streamlined processes, easy-to-use

TASQ® field of application: Screening, quantitation

TASQ (Target Analysis for Screening and Quantitation) is Bruker's solution for target and non-target screening, confirmation, and quantitation of large sample batches, including hundreds of compounds per analysis. The CCS-enabled TASQ solution allows exploiting the ion mobility separation on timsTOF instruments for absolute confidence in your results. TASQ takes advantage of both nominal and high resolution, accurate-mass data generated by Bruker's triple quadrupole and QTOF mass spectrometers. TargetScreener HR – driven by TASQ – allows report generation from 'vial to report' in seven clicks. TASQ includes now support of Audit Trail, User Action Rights and User Access Control.

MetaboScape® field of application: Discovery

MetaboScape software adds workflows for the detection and identification of unexpected compounds using statistical tools (calculation of elemental compositions, search for structure candidates in personal and public databases, *in-silico* fragmentation of structure candidates & MS/MS spectrum match, prediction of metabolites and *in-silico* fragmentation) as well as spectral libraries. For timsTOF, timsTOF Pro and timsTOF fleX PASEF data, MetaboScape offers the CCS-Predict Pro confirmation tool. Based on machine learning, it predicts CCS values for structures, yielding supreme confidence in annotations. CCS and retention time aware Kendrick mass defect (KMD) plots offer an intuitive 4D visualization tool for investigation of assignments and detection of novel species.

PolyTools field of application: Polymer analysis

PolyTools interprets homopolymer spectra in any mass range. Equidistant signals are automatically found and interpreted as individual polymer distribution. Based on user-defined tables of monomer units and end-groups PolyTools suggests interpretations of the ion series. For each single distribution average molecular weights, dispersity, degree of polymerization and percentage of the individual ion series in the spectrum can be calculated. Results are displayed in the form of several Kendrick mass defect (KMD) plots and in a table format.

Service Agreements

Choose one of the following LabScape Maintenance Service Agreements available for selected MS, LC, and GC instruments:

LabScape Connect – Affordable remote service model. A basic package with unlimited remote access with experienced factory-trained service engineers.

LabScape Essential – Ensure peak performance. A combination of remote support and regular annual maintenance helps you operate your instrument under its optimal conditions.

LabScape Access – A cost-effective solution for unforeseen instrument breakdowns in low throughput laboratories with unlimited on-site repair visits including spare parts.

LabScape Complete – All support you need. A comprehensive solution providing complete service coverage including spare and wear and tear parts which helps you avoid instrument failures, costly repairs and down time.

LabScape Complete 48 – All the support you need within 48 hours. A VIP package including guaranteed on-site response within 2 business days to resolve the problem before it affects your business.

	LabScape Connect	LabScape Essential	LabScape Access	LabScape Complete	LabScape Complete 48
Remote Services					
Remote Monitoring*	✓	✓	✓	✓	✓
Unlimited Priority Remote Support	✓	✓	✓	✓	✓
Software services					
Compass & Data Analysis SW Upgrades	✓	✓	✓	✓	✓
Postprocessing SW Licenses & Upgrades**		discount	discount	premium discount	premium discount
Upgrade of Postprocessing Software**				1 Voucher p.a	1 Voucher p.a
Regular Maintenance					
Regular Maintenance Work and Parts		✓	✓	✓	✓
On-site Repair Services and Parts					
Unlimited Repair Visits incl. Spare Parts			✓	✓	✓
Wear and Tear Part Replacement	discount	discount	discount	✓	✓
Loaner Equipment*					✓
Compliance Services					
Operational Qualification / Perform. Validation					included
On-site Response Service Level					
On-site Response			3-5 business days	3-5 business days	2nd business day
Additional benefits					
Consumable Parts	discount	discount	discount	premium discount	premium discount
Operation Training or Applications Training	discount	discount	discount	premium discount	premium discount

* if applicable to the respective MS product

** SCiLS, BioPharma Compass, MetaboScape, TASQ

Environmental, Social and Governance

Innovation with Integrity

As a forward-thinking, innovative company, Bruker has a rich legacy of protecting the environment, treating others with dignity and respect, and following the highest standards of ethical compliance and governance. These principles more recently characterized as Environmental, Social, Governance (ESG), have been an integral part of our DNA for over 60 years.

Bruker's innovative technologies and solutions support scientists and businesses around the world to explore, understand, and improve the world in which we live. Our innovative spirit drives solutions intended to address environmental challenges, improve recycling, advance research discovery, identify hazardous and harmful materials in the environment, and keep our foods and environment safe. We are proud to support a more sustainable future.

As a global innovation leader in developing and marketing advanced analytical technologies and solutions, our scientists and engineers support businesses and scientists around the world to better understand environmental hazards, protect our essential food supply, research clean, sustainable energy, and search for new ways to improve the quality of life. We are especially proud to collaborate closely with many of our customers on ways to ensure a more sustainable future.

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