



● **timsTOF Platform**

The next generation multitool for food and environmental research

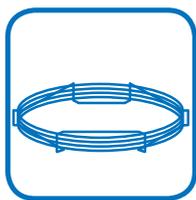
Four reasons to switch to Trapped Ion Mobility Mass Spectrometry for food and environmental analysis applications:

1

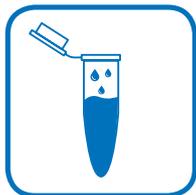
The timsTOF is one solution for many challenges

Versatility and flexibility to ace multiple applications with interchangeable LC-ESI, GC-APCI, IC-APCI, optional MALDI TLC, DART, and several other front-ends

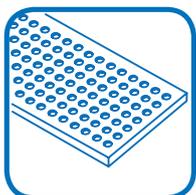
- Get the most out of your investment and your lab space – apply the power of timsTOF to multiple analytical tasks.
- Get the best sensitivity and maximum analytical coverage for diverse compound classes using the VIP-HESI dual ion source.
- Obtain the best sensitivity and maximum analytical coverage for many classes of compounds that you are interested in.
- From biomarker discovery and food authenticity validation, to fermentation or other process evaluation, to rapid analysis dioxins, PFAS, pesticides, mycotoxins, or other contaminants and pollutants – the timsTOF can be switched from one workflow to another in a matter of minutes.



GC-APCI

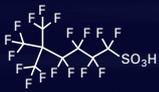


LC-ESI/APCI



MALDI TLC





Perfluoro-5,5-dimethylhexane sulfonic acid (5,5)



Perfluoro-4-methylheptane sulfonic acid (4)

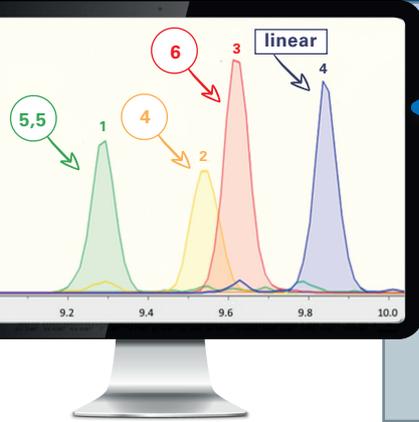


Perfluoro-6-methylheptane sulfonic acid (6)

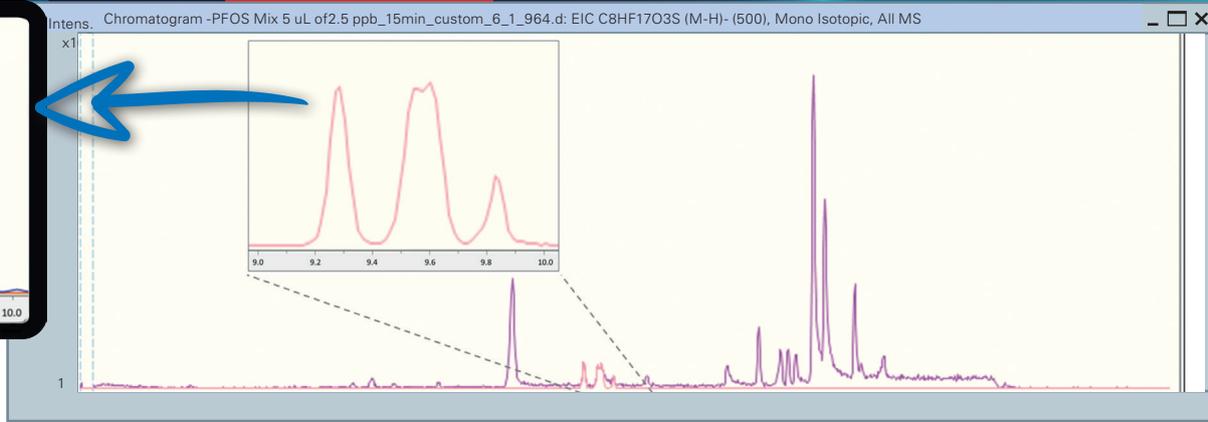


Perfluorooctane sulfonic acid (linear)

Mobility-filtered EICs



Unfiltered EIC

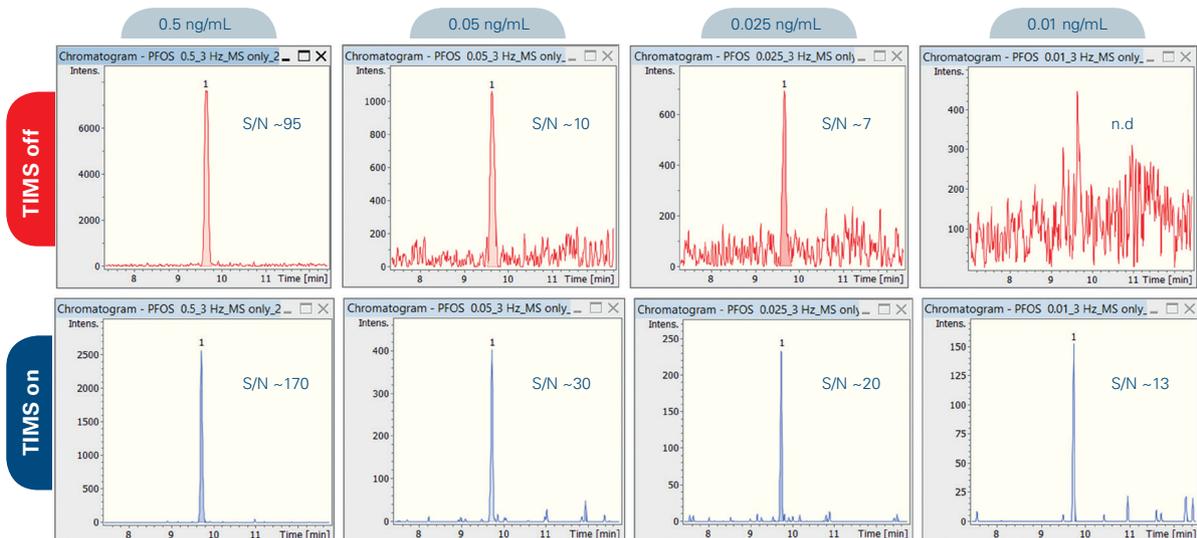


2

The timsTOF is a solution to see and do what you could not before

Analytical power of the high-resolution mass spectrometry reinforced by high-resolution trapped ion mobility separation

- Separate the most challenging coeluting isomers with ease.
- Simplify analysis of the most complex samples using an extra analytical dimension - ion mobility separation.
- Be more confident in compound identifications with addition of the highly accurate collisional cross section confirmation.
- 'Detect everything' and take advantage of retrospective analysis using an instrument (a solution) that captures all the data all of the time.
- Get higher sensitivity in difficult matrices with using collisional cross section filtering.





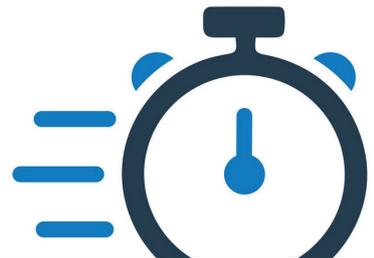
The timsTOF is a solution spending less time and obtaining more results

Faster data acquisition combined with seamlessly integrated software automation of the most difficult and routine analytical tasks

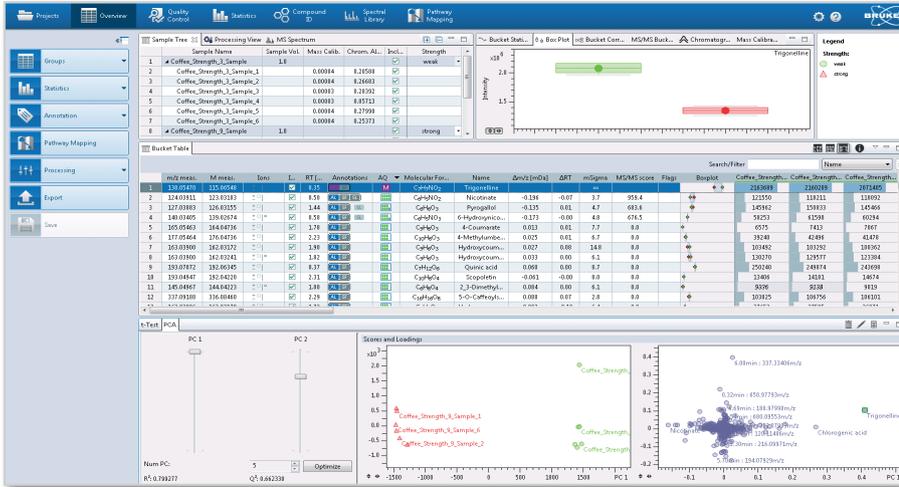
- Utilize ion mobility separation to run faster chromatographic gradients or turn to MALDI for a lightning-fast data acquisition.
- Get going faster with predeveloped methods and highly curated databases for thousands of relevant analytes, including pesticides, veterinary drugs, environmental pollutants, and toxins.
- Save time on data reviews and reporting with highly automated targeted screening and quantitation workflows.
- Seamlessly transition between targeted and untargeted workflows.

The screenshot displays the Bruker timsTOF software interface, which is used for data analysis and reporting. The interface is divided into several panels:

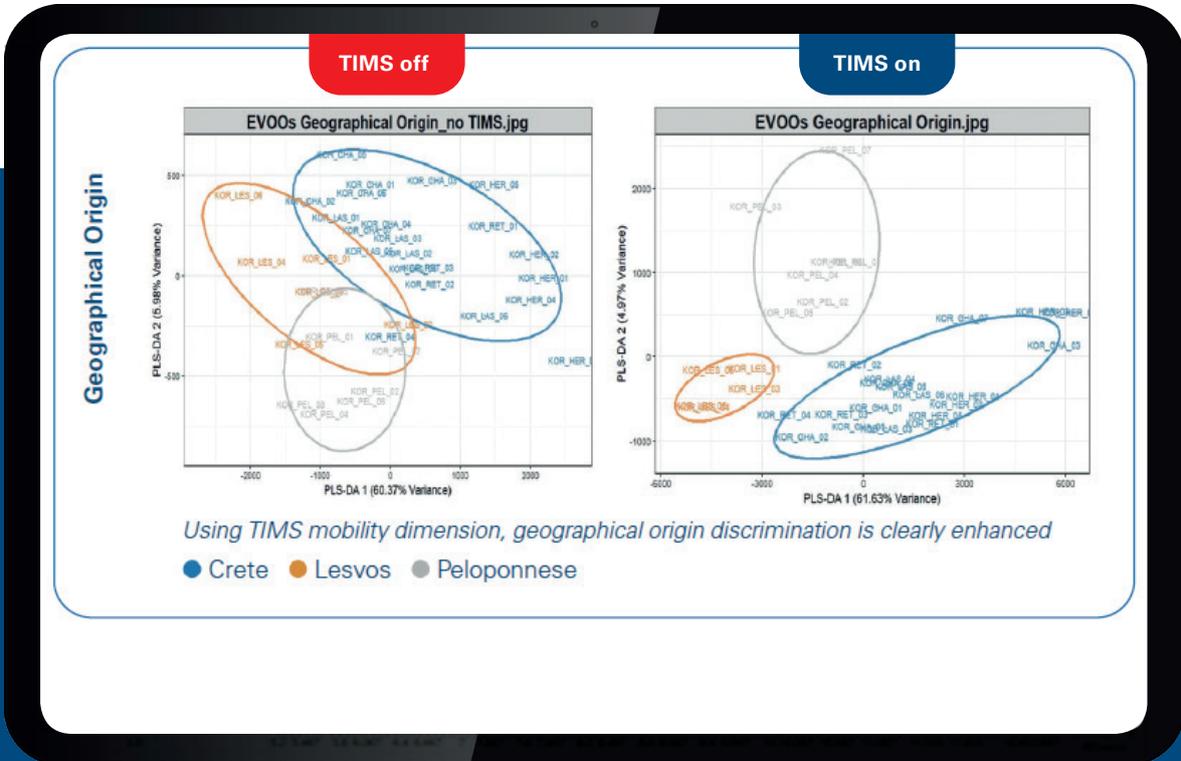
- Batch Navigator:** Shows a list of analysis results with columns for Analyte, MS/2, Score, Δm/z (m/z), Δm/z (ppm), m/z Score, ΔRT (min), RT Score, mSigma, mSigma Score, Exp. Degrad., Found Degrad., and Area.
- Analysis Results:** A table showing detailed results for various analytes, including their formulas, ion types, and scores.
- Chromatogram:** A plot showing intensity versus time (min) for a specific analyte, with peaks labeled.
- Mass Spectrum:** A plot showing intensity versus m/z for a specific analyte, with peaks labeled.
- Calibration Function Graph:** A plot showing the relationship between concentration and signal for a specific analyte, with a linear fit line.
- Calibration Residual Plot:** A plot showing the residuals of the calibration function, indicating the quality of the fit.
- Active Data Point:** A table showing the results of the active data point analysis, including columns for Sample Type, MS/2, RT (min), Quantity exp., Quantity, Area, Intensity, Accuracy [%], Residual [%], Area [I], Rel. Area, and Recovery [%].



- Use automatic mass annotation of unknowns to timely detect unexpected contaminants and mass adulterations.
- Save time with a streamlined workflow for structural elucidation of unknowns.
- Utilize multi-sample comparison and difference finding functionality for chemical process development or supplier validation.



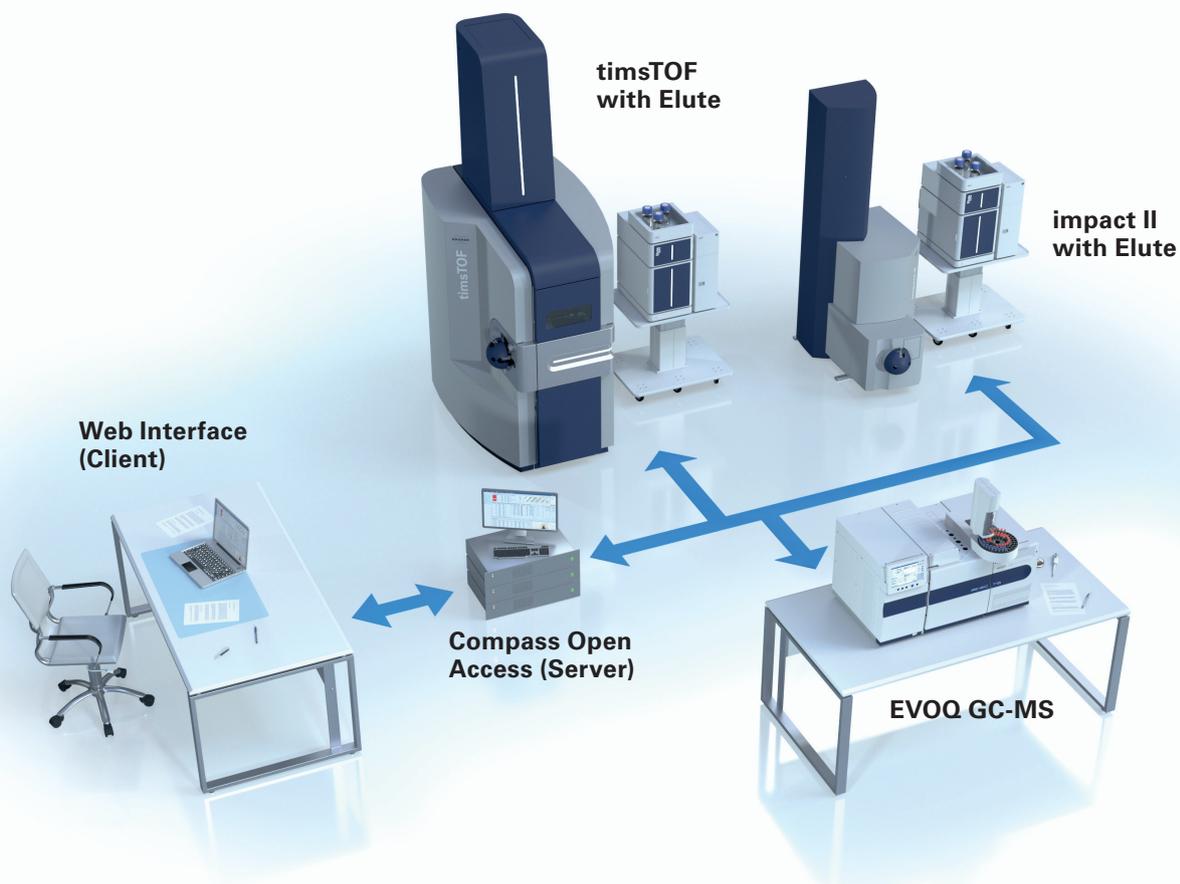
- Leverage the power of integrated statistical analysis tools for biomarker discovery, food authenticity and place origin confirmation, or environmental research.





The timsTOF is a solution that fits seamlessly into Bruker's unique network centric lab architecture

Work on your analytical data anywhere in the world, share it with your colleagues and link multiple different MS instruments into one integrated system.



For Research Use Only. Not for use in clinical diagnostic procedures.

● Bruker Daltonics GmbH & Co. KG

Bremen · Germany
Phone +49 (0)421-2205-0

● Bruker Scientific LLC

Billerica, MA · USA
Phone +1 (978) 663-3660



You are looking for further Information? Check out the Link or scan the QR Code.

www.bruker.com/timstof

ms.sales.bdal@bruker.com – www.bruker.com