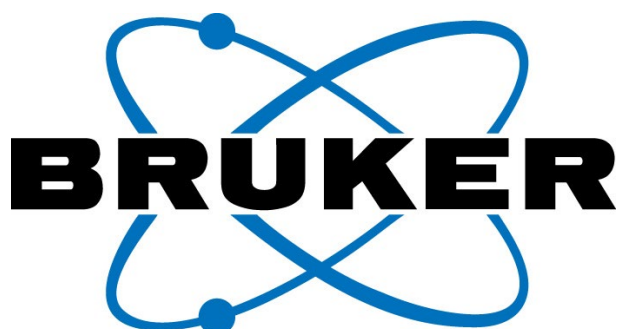


November 4, 2021 (14:30-15:15, CET)



VENDOR WEBINAR:

Use timsTOF Ion Mobility Technology to Improve Results in Food Analysis

Using VIP-HESI and Trapped Ion Mobility Spectrometry to improve confidence in identification

Dr. Carsten Baessmann, Bruker Daltonics GmbH & Co. KG, Bremen, Germany

In the past years, ion mobility has matured into an extremely valuable addition to high-resolution mass spectrometry. Trapped Ion Mobility (TIMS) technology ensures high resolution and highly accurate collisional cross section (CCS) values. Thus, this 4th dimension is able to filter out the chemical background and separate isobaric co-eluting compounds. The associated CCS values for all detected compounds can be used as an additional criteria for the identification of both knowns and unknowns. As ion mobility becomes more and more common, the number of CCS references values in libraries and databases is growing rapidly. When used in a targeted approach, as an additional criteria, CCS values help to increase the reliability of identification and reduce the number of false positives, especially speeding up the review of large sample sets. If TIMS is used in combination with the increased sensitivity obtained from a VIP-HESI source then positive identifications is possible at very low level concentrations. With a duty cycle of 100%, no changes to chromatographic gradients are required allowing this unique combination to provide analytical reporting with greater confidence.

Workflow for setting up and controlling food authenticity analysis

Noud van der Borg, Bruker Nederland BV, Leiderdorp, Netherlands

Food adulteration and authenticity has a greater interest with the public in general and developments in hardware provides better sensitivity, and more accuracy, in elucidating these topics. Historically, the complexity of the workflow made these analyses a task for specialists. However, due to developments in software workflows, 'ready-to-go' solutions have been developed to determine authenticity markers and subsequently use them in a routine process. By having additional separation

power provided by Trapped Ion Mobility Spectrometry (TIMS) and better calculation algorithms, minor differences in the food 'fingerprint' between different regions of authenticity, or lower levels of adulteration become easier to rapidly discern allowing large numbers of samples to be screened.

Positioning of high through put MALDI and high separation HRMS will be explained within this presentation.