VENDOR SEMINAR:

Improved Characterization of Fatty Acids in Food for Reliable Nutritional Labelling

High throughput, reliable characterization of fatty acids in food using a rapid single-step microwave-assisted extraction and derivatization method followed by flow-modulated GC×GC-FID

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The optimization and validation of a highly throughput and sustainable method for accurate FAME determination is herein presented and discussed.

A single-step microwave-assisted extraction and derivatization (MAED) method for characterizing FAME in a wide variety of food commodities was optimized and compared with the results from two different official FAMEs preparations (AOCS Official Method Ce 2b-11; Cruz-Hernandez et al. J AOAC Int 87(2) 2004 545). Moreover, a higher level of information along with a faster characterization was obtained using reversed fill/flush flow modulation comprehensive two-dimensional gas chromatography (GC×GC) coupled to FID for the analytical determination. Such a configuration is not only more sensitive than a mono-dimensional GC separation, but also allow for a higher separation speed, in terms of peak separated per unit of time, and a more unambiguous identification of FAMEs in complex mixture.