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Biodiesel (FAMES) - Oxidation and the Analytical Challenge

Abstract

This presentation will discuss biodiesel analysis at Southampton, in particular oxidation of FAMES, through the use of HPLC-MS, GC-MS, SFC-MS (and MS-MS) and electrochemical oxidation mass spectrometry (EC-MS) to follow the fate of FAMES with the goal of understanding the oxidation processes and related stability issues of these materials. The use of EC-MS can mimic some of the oxidation processes, condensing the oxidation process into a few minutes compared to many years for auto-oxidation.

Biography

John is Head of Characterisation and Analytics, Chemistry, Faculty of Natural & Environmental Sciences, University of Southampton, UK . He has nearly 30 years' experience of mass spectrometry and has been responsible for the MS Facility in Chemistry at the University of Southampton since 1988. His interests are the application of mass spectrometry as a routine tool for chemistry/chemical biology as well as probing new areas for research using MS and separation science-MS. Specific interests are the application of hyphenated approaches (GC-MS, HPLC-MS & SFC-MS) to analysis of petrochemicals, particularly biofuels and research into analysis and detection of oligonucleotides and understanding fundamental MS/MS fragmentation processes and mechanism, the latter including the use of computational methods.

Date: 5th March 2013 (Tuesday)

Time: 2.00pm

Venue: Centre for Life Sciences , level 1, Seminar room 2

Host: A/P Markus R. Wenk