

# Organic mixture analysis by gas chromatography and mass spectrometry

Speaker	Prof. Egmont Rohwer, Dept. of Chemistry, University of Pretoria, South Africa
Host	Dr. Artur Braun, Empa Dübendorf
Audience	Everybody interested in GC-MS for aroma analysis and environmental science
Date	Friday, August 22, 2014, 14:00 – 15:00
Venue	Empa, Dübendorf, Auditorium VE 102

## Abstract

A lecture on strategies for organic mixture analysis by gas chromatography and mass spectrometry focusing on some own inventions and applied areas such as aroma analysis and environmental analysis.

More specifically, the author will discuss the development of multi-channel silicone rubber traps to enable olfactometric investigations where conventional in-line coupled gas chromatography and olfactometry (GCO) fail because of the challenges associated with synergism in aroma perception. The same traps allow us to do multi-dimensional GC analysis for forensic environmental investigations where enantiomeric ratios of DDT breakdown-products need to be determined. Another application of the traps allow us to do laser fluorescence screening of poly aromatic hydrocarbons (PAH's) before transferring positive samples to GC-MS for final analysis. They also allow us to perform air pollution analysis where the need arises to differentiate between free molecular pollutants from particle associated pollutants in the air, typically to assess the potential toxicity to humans due to the differential absorption of these species in the lungs.