ecTOF

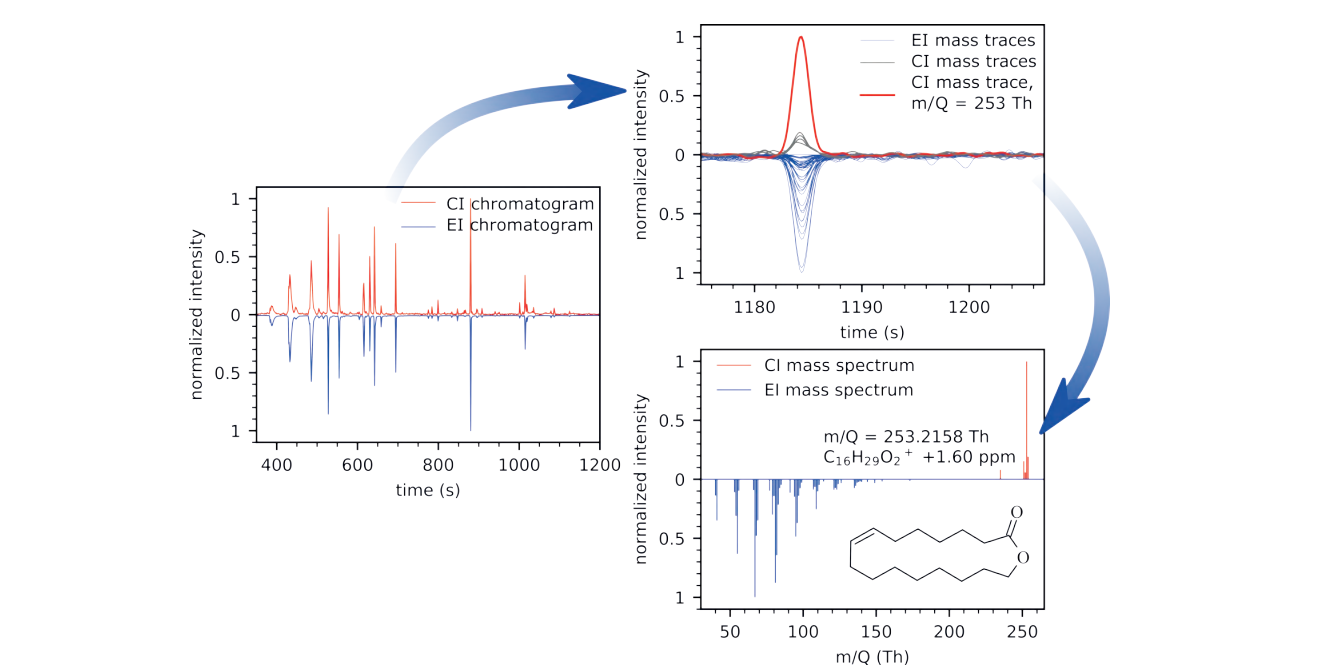
A powerful tool for target, suspect and non-target analysis

TOFWERK

GC- and Real-Time Mass Spectrometry

Combined modes of EI and CI operation enable multi-dimensional analysis for target, suspect, and non-target applications.

Example Mode: Parallel Operation of Electron Ionization (EI) and Chemical Ionization (CI) within a Single GC Run

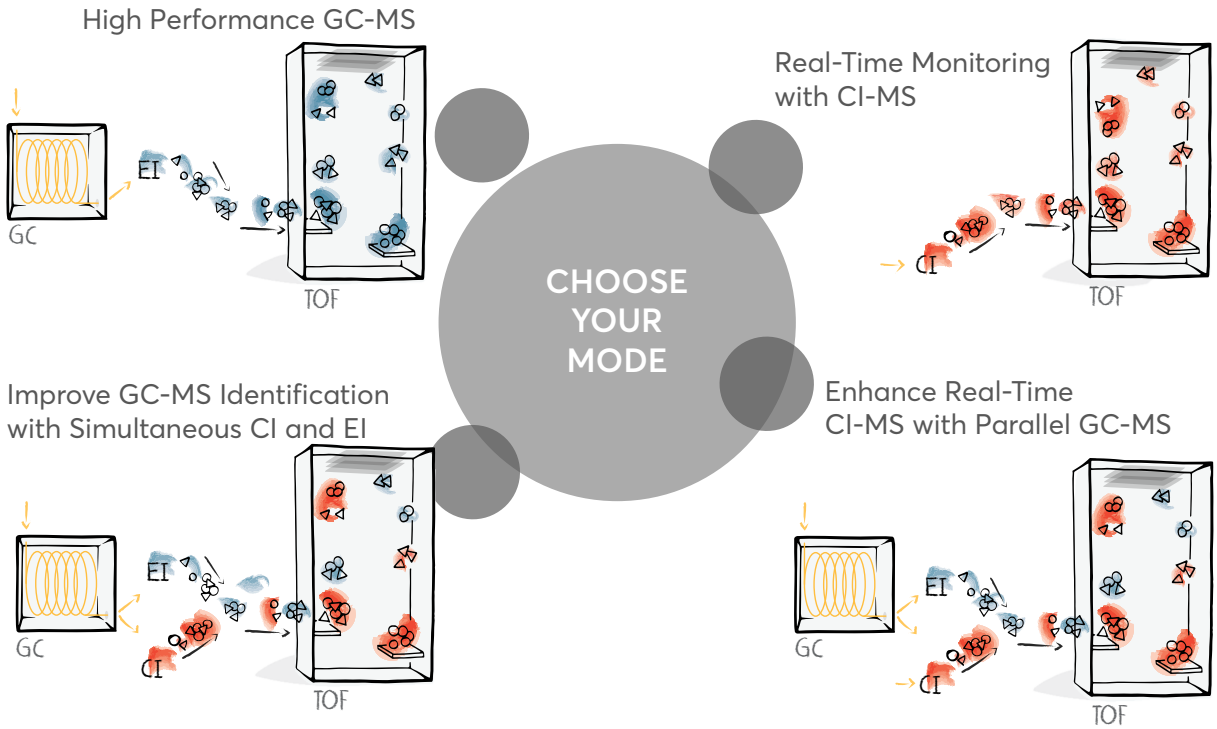


Example application: Parallel recorded CI (red) and EI (blue) chromatograms of a perfume sample resulting in synchronous acquisition of molecular and fragment ion information for improved compound identification via high resolution, accurate mass GC-MS.

- Molecular (CI) and structural (EI) information are simultaneously collected with one TOF mass spectrometer
- GC pre-separation and/or direct, real-time analysis
- Mix-and-match sampling and ionization methods for different modes of operation
- Multiple CI sources and reagents available
- Reliable identification and quantification of compounds
- Single data processing workflow to interpret and align EI and CI data

Two Ionization Sources, One Mass Spectrometer

The ecTOF combines electron ionization (EI) and chemical ionization (CI) using a single time-of-flight (TOF) mass analyzer. Within a single measurement the instrument enables the generation of a comprehensive data set including molecular and structural information of the compounds of interest.



The combination of ion sources and sampling methods yields multiple modes of operation. Different modes generate molecular information by CI and structural information by EI.

ecTOF

Specifications

Mass Resolving Power (Th/Th)	Relative Mass Accuracy (ppm)	LOD CI* (fg benzophenone)	LOD EI* (fg OFN)	Linear Dynamic Range (OOM)	Ion Source Switching Speed (Hz)	EI Energy (eV)
10 000 (2R) 4 500 (R)	< 5	< 500	< 10	> 4.5	15	adjustable up to 70

* non-switching mode

- Fully compatible with Vocus CI-TOF PTR / Aim reactors and a proprietary GC-HRP CI source
- Couple to common GC Systems with ease
- Maintain CI source without venting
- Extensive options for reagent ions for GC-CI-MS with HRP source, including: N_2H^+ (N_2), $C_4H_9^+$, H_3O^+, NH_4^+
- Reagent ions for real-time CI-MS with Vocus PTR and Aim Reactor: H_3O^+, NH_4^+, NO^+, O_2^+, I^-, Br^-

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