



FlavourSpec[®]25

Gas Chromatograph – Ion Mobility Spectrometer (GC-IMS)

**Determination of Volatile Compounds
in Food and Beverages**

The FlavourSpec®25 encompasses the improved performance of the orthogonal separation of a Gas Chromatograph GC coupled to an Ion-Mobility-Spectrometer IMS by enabling temperatures of 100°C on both. The headspace injector is improved to run up to 200°C. Even semi-volatile compounds with RI of up to 1800 become accessible. Electronic Pressure Controlled EPC actuated flow ramping and the new FOCUS®-IMS design enable a cutting-edge separation performance. The versatility of the 3-D software 'VOCal' with its various analytical tools and Plugins enables an unparalleled data evaluation. Using the new 'PAL-Control' software enables the remote control from a PC/laptop.

FlavourSpec®25 – KEY FEATURES

- Twofold separation of GC and IMS
- Direct HS sampling, no pre-treatment
- Injection counter
- Elevated temperatures (100°C on GC and IMS, 200°C on injector)
- High sensitivity for (off-) flavour compounds in single digit ppb-range
- Flow ramping for a better peak separation
- FOCUS®-IMS increases dynamic range
- 3-D software 'VOCal' with integrated NIST (RI) indices and GCxIMS library
- 'PAL-Control' software for remote control

Exemplary Applications*

- Test of raw materials/food freshness
- Product authentication/storage
- Process control (e.g. beer brewing)
- Flavour profiling and documentation
- Claim management

* Application Notes on request



TECHNICAL SPECIFICATION

Separation I: Retention time
Gas Chromatograph (GC): Isothermal (≤ 100°C), EPC guided carrier gas ramping
All capillary columns: ≤ 60m

Separation II: Drift time
Ion mobility spectrometer (FOCUS®-IMS)
Ionisation: β-radiation - ³H
Activity: below the exemption limit of 1 GBq acc. to EURATOM Directive 2013/59

Detection: Electrometer

Flow Control: Two EPCs for flow stability same as GC and IMS flow ramping

Sampling: Static headspace (ambient) (optional: in tube extraction for sample enrichment - ITEX)

Operating gas:
Nitrogen or synthetic air: Quality 5.0

Operation: Touch-screen 6.4" TFT or remote PC-control

Data storage (internal): Flash memory 32GB
Data output: Ethernet to PC (TFTP, SMB)

Temperature: Operation 5 – 35°C
Moisture: up to 95% non condensating

Power range: 85 - 265 V AC, 47-63 Hz

Power consumption: < 221 Watt

Autosampler: PAL3 RSI

Features: Incubator, agitator, gastight syringe

Sample capacity: 60 vials (10 or 20 mL)

Dimensions: 1010 x 800 x 790 mm (WxDxH)

Weight: 25 kg (FlavourSpec and PAL3)