Analytical – Ion Mobility Spectrometer

Sensitive Detection of gaseous Volatile Organic Compounds (VOCs)

Analytical-Ion Mobility Spectrometer (A-IMS) – Your easy-in-use analytical Tool

The A-IMS offers excellent features for fast and sensitive detection of gaseous traces of VOCs. Results are typically available within seconds within the ppb$_v$- or even ppt$_v$-range. Its modular concept and accessibility of parameters allows to configure and fine-tune the device according to the specific analytical measurement assignments.

Features

- Stand-alone unit with integrated computer
- Operation mode: open system using external gas supply or closed gas circuit
- Sampling: direct inlet, membrane inlet system, or electrical six-port-valve with sample loop
- Temperature control for IMS, membrane inlet system and six-port-valve (up to 80°C)
- Access to all relevant parameters for method development
- Software controlled switching between positive and negative ionization mode
- Manual or fully-automatic operation mode including data acquisition, -analysis, visualization and transfer to external devices
- Storage of data on internal memory or external network shares
- Adaptable to external devices (gas chromatograph, autosampler, etc.) with automated start via trigger

Applications

- Quality control
- Residual solvents
- Authentication
- Alternative GC detector

Technical Specification	
Working principle: Ion Mobility Spectrometry	
Ionisation: Radioactive ß-radiation source	
Source: Tritium (^{3}H)	
Activity: 300 MBq, below the exemption limit of 1 GBq, EURATOM guideline	
Drift voltage polarity: Positive and negative, switchable	
Sampling: Direct, membrane or electrical 6-port-valve	
Range: Semi-quantitative, typically low ppb$_v$	
Dynamic range: 1-3 orders of magnitude	
Display: 6.4" TFT, VGA-Display	
Input unit: Rotary pulse encoder	
Processor: 400 MHz X-scale	
Data aquisition: Ultra-fast ADIO-board	
Data processing: X-board / Baseboard	
Data storage: 2 GB Compact-Flash	
Communications: RS232, USB, Ethernet	
Electrical connectors: 2 x D-Sub 9-pole (for modem, console), D-Sub 15-pole (for external devices), RJ45 (for digital modem or SSH), 2 x USB-A	
Power supply: 100-240 V AC, 50-60 Hz (external supply), 24 V DC / 5A, XLR-connector (internal)	
Power consumption: < 180 Watt	
Dimensions: 449 x 375 x 177 mm (WxDxH)	
Weight: 13 kg	
Housing: 19" compatible, IP 20 enclosure, EMC certificated	
Gas connectors: 3 mm stainless steel Swagelok connectors for gas in- and outlet	