

GAM 600 SI

Soft Ionisation Mass Spectrometer
for complex mixture analysis

fast

selective

quantitative

sensitive

flexible



flexible

GAM 600 SI

Fast online analysis of complex gas mixtures

sensitive

The GAM 600 SI mass spectrometer was developed for the analysis of complex gas mixtures. It is a dedicated system that proves most useful when difficult analytical problems have to be solved. The special ionisation technique in connection with the high sensitive ion counting detection offers enhanced selectivity and provides sensitivity to the ppb-range. Equipped with a heated and pressure controlled gas inlet system and the possibility to select different reagent gases, the instrument matches most demanding analytical requirements.

The GAM 600 SI provides fast and reliable measurement results and is switchable from Soft Ionisation (SI) to conventional Electron Impact (EI) ionisation. Based on reliable quadrupole technology the system combines know-how and experience in mass spectrometry, vacuum technology, online gas analysis and process monitoring. Intuitive software control of the measuring process and software algorithms for data evaluation makes it easy to get accurate data.

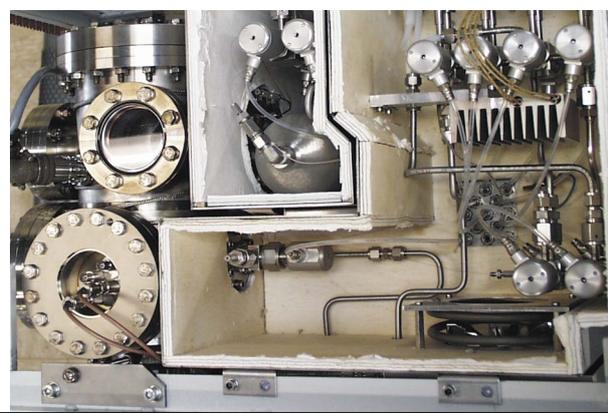
Typical areas of applications are: catalyst research and catalytic processes, automotive engine development and emission minimisation, air pollution and stack gas monitoring.

Multicomponent Gas Analysis

- Hydrocarbons (e.g. methane, ethylene, acetylene)
- Aromatic hydrocarbons (e.g. benzene, toluene, xylene)
- Oxygen containing compounds (e.g. alcohols, aldehydes)
- Inorganic compounds (e.g. NH₃, NO, CO, CO₂, O₂, N₂, H₂)
- Sulphur containing compounds (e.g. H₂S, SO₂, COS)

Advantages of the GAM 600 SI

- Fast and sensitive analysis
- Selective detection of gas mixture components
- Fast change of reagent gases and simultaneous usage of different reagent gases
- Low consumption of reagent gases
- High stability ion source with long up-time
- Broad range of applications due to different ionisation techniques (SI or EI)
- Multidimensional data evaluation for the correction of possibly occurring interferences caused by matrix constituents (e.g. water)

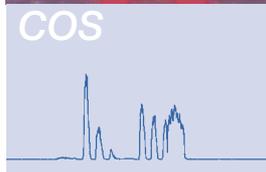
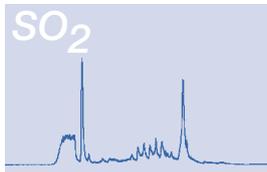
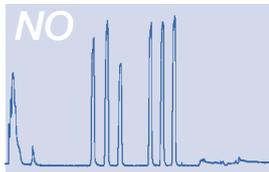




fast

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quantitative



(Courtesy of Volkswagen AG, Wolfsburg, Germany)

selective

Best Suited for Automotive Industry

The *GAM 600 SI* is a powerful instrument for research and development in automotive industry. Prominent applications are:

- Optimisation of engine performance
- Minimisation of engine emission
- Improvement of catalyst converter efficiency
- Fuel cell development

The Soft Ionisation mechanism together with mass spectrometric detection improves selectivity, quantification and detection limits compared with other gas detectors. While maintaining the high time resolution of mass spectrometry, the absence or at least suppression of matrix effects is the key for your analytical success. Through our strong cooperation with customers, vendors and engineering companies of related equipment we can offer the best solution for your needs.

GAM 600 SI

Technical Features

- Mobile compact rack
- Differentially pumped vacuum system
- Two ionisation modes (SI or EI)
- Temperature stabilised primary gas inlet system
- Different primary gas mixtures available
- Pressure controlled and heated sample gas inlet system
- Automatic valve switching
- Ion counting detection system
- Several analog/digital inputs and outputs
- Long-distance modem support
- InProcess QUADSTAR software
- Quadrupole analyser with mass range 1-300/512 amu
- Signal stability better than 3% over 12 hours in SI mode
- Sensitivity in the ppb-range
- Variable measuring time from 1 millisecond to 10 seconds per channel
- Switching between different reagent ions in less than 10 milliseconds
- Response time better than 50 milliseconds
- Customised configuration



IPI InProcess
Instruments

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