

# Introducing the DISCOVERY MS

TA Instruments is proud to introduce the latest addition to our industry-leading Discovery Series® product line, the Discovery MS.

The Discovery MS is a benchtop quadrupole mass spectrometer, designed and optimized for evolved gas analysis. It is compatible with all thermogravimetric instruments in the TA Instruments product line, including the Discovery TGA, Q-Series TGAs, and the TGA-HP products.

The Discovery MS features industry-standard technology configured for the efficient transfer, and rapid detection of offgas from the TGA furnace. Parts per billion (ppb) sensitivity is ensured with our state-of-the-art quadrupole detection system, including a closed ion source, a triple mass filter and a dual (Faraday and Secondary Electron Multiplier) detector system. This analyzer configuration is selected to optimize sensitivity and long term stability performance.

Control of the experimental parameters and analysis of the mass spectral data is achieved through a user-friendly, recipe-driven software interface. Data collection can be triggered directly from the TGA software, and the resulting MS data can be combined with the corresponding TGA results for direct overlaying and comparison.

Discovery Mass Spectrometer Specifications

Parameter	Performance
Mass range (amu)	1-300
Mass Resolution	>0.5 amu
Sensitivity	< 100 ppb (gas-dependent)
Ionization Source	Electron Ionization
Detector System	Dual (Faraday and Second Electron Multiplier)
Sample Pressure	1 atm (nominal)
Data Collection Modes	Bargraph and Peak Jump
Scanning Speed	
Bargraph Mode	>50 amu/sec
Peak Jump Mode	>64 channels/sec
Transfer line Temperature	300°C (fixed)
Transfer line	1.8 meters, flexible
Filaments	Dual, customer changeable
Capillary	Stainless Steel, changeable
Capillary size	I.D. = 0.22mm
Inputs	Data collection controlled by TGA Trigger

