

1st Detect's MMS-1000™ ion trap mass spectrometer is designed for an array of measurements where size, transportability or cost, are important. This versatile instrument adapts to a wide range of applications using multiple inlet configurations and customizable software.



SPECIFICATIONS

- **MASS RANGE:** 45–400 amu (standard)
Custom ranges available, see *Options*
- **MAX SCAN RATE:** 38k amu/sec (45–400 amu)
- **SCANS/SEC:** 1 spectra/sec (typical) 7 spectra/sec (maximum), with 14 TIC points/sec.
Faster scan rates require special settings.
- **RESOLUTION:** Better than Unit Mass
- **MASS STABILITY:** Within ± 0.5 amu over an 8-hour period
(measured at $m/z = 91$ amu xylene with continuous sampler)
- **DETECTOR:** Channel Electron Multiplier
- **SENSITIVITY:** (measured at $m/z = 91$ amu xylene)
Membrane Inlet 500 ppb, *Preconcentrator* 500 ppt using 30 sec sampling time
- **MS/MS CAPABLE:** No collisional gas or buffer gas required
- **IONIZATION MODE:** Electron Ionization
- **AVERAGE POWER:** MS operation <45W (typical) 70W (maximum)
- **INPUT POWER:** Supplied Universal 110/220 VAC supply
- **WEIGHT:** < 17 lbs (8 kg)
- **DIMENSIONS (W x H x D):** 7.5" x 13" x 9" (19 cm x 33 cm x 23 cm)
- **STARTUP TIME:** < 20 minutes from cold start (typical)
- **TURBO PUMP:** 10 L/s turbomolecular pump
- **ROUGHING PUMP:** 5 L/min diaphragm vacuum pump

FEATURES

1st Detect is able to provide a wide variety of custom solutions to fit your unique application. Our offerings include, but are not limited to:

- **ADAPTIVE SAMPLE COLLECTION** - 1st Detect's Miniature Mass Spectrometer (MMS-1000) can be coupled to a variety of sample collection, preconcentration, or separation systems to suit the needs of a particular application.

BENEFITS

- Small footprint instrument for high performance analysis and detection applications in less space
- Versatility of inlet configurations allows for coupling to your specific sample preparation systems
- Lower cost alternative to traditional laboratory instruments
- Integrated preconcentrator increases sensitivity
- Air is used as a carrier gas, no cylinders or external supply required

SOLUTIONS

INDUSTRIAL



Odor, flavor, fragrance, quality control

EDUCATION



Teaching labs, research

OPTIONS

- **CUSTOM MASS RANGE** - The MMS-1000 is able to measure any ion mass from 15 amu to 500 amu. If you require a mass outside of the standard 45–400 amu window, please note that the overall mass range may change. Typical mass ranges are: 15–45 amu, 45–400 amu, 100–500 amu.

