1st Detect

MMS 2000

SELECTIVE, SIMPLE, AND ACCURATE PROCESS MONITORING

1st Detect's MMS 2000 is a highly selective and accurate process gas monitor designed to provide precise, real-time measurement of specific chemicals in a process stream. By selecting which ion masses to monitor, the MMS 2000 can continuously report the abundance of a set of chemicals in order to optimize yield or identify out-of-spec conditions.

SPECIFICATIONS

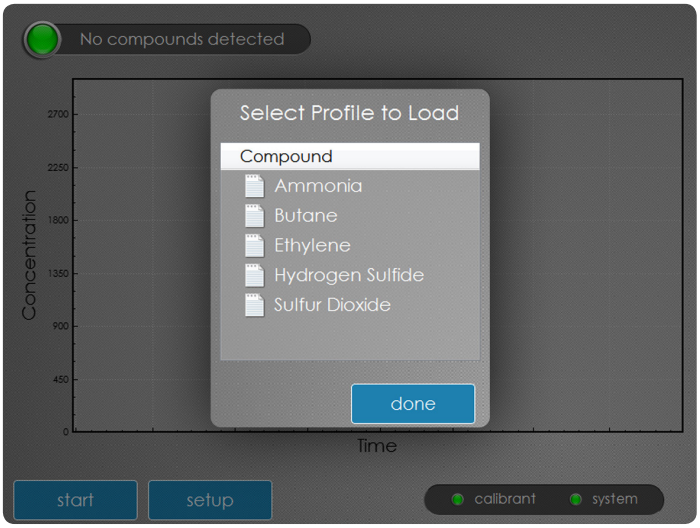
- **MASS RANGE:** 45–400 amu (standard)
  Custom ranges over 15 amu to 500 amu available, *see Options*
- **MAX SCAN RATE:** 38k amu/sec (45–400 amu)
- **SCANS/SEC:** 1 spectra/sec (typical) 7 spectra/sec (maximum), with 14 TIC points/sec. Faster scan rates require special settings.
- **RESOLUTION:** 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)
- **LONG TERM MASS ACCURACY:** < 5 % RSD (measured at 91 amu xylene over 1 month)
- **DETECTOR:** Channel Electron Multiplier
- **GASES MONITORED:** User programmable
- **MS/MS CAPABLE:** No collisional gas or buffer gas required
- **SENSITIVITY:** (measured at m/z = 91 amu xylene)
  Capillary 500 ppb, *Preconcentrator* 500 ppt using 30 sec sampling time
- **IONIZATION MODE:** Electron Ionization
- **POWER:** 225W maximum / 7A
- **INPUT POWER:** Supplied Universal 110/220 VAC Supply or hardwired to line power
- **COOLING:** Integrated vortex cooler (requires CDA @ 15–20 cfm)
- **DIMENSIONS (W x H x D):** 24" x 30" x 12" (61 cm x 76 cm x 31 cm)
- **COMMUNICATION PROTOCOL:** IEEE 802.3 10/100 Ethernet
- **STARTUP TIME:** < 30 minutes from cold start (typical)
- **SAMPLE INLET:** ¼" SwageLok (customizable for specific applications)
- **SAMPLE FLOW:** < 600 mL/min (capillary, continuous mode), < 1 L/min (preconcentrator)

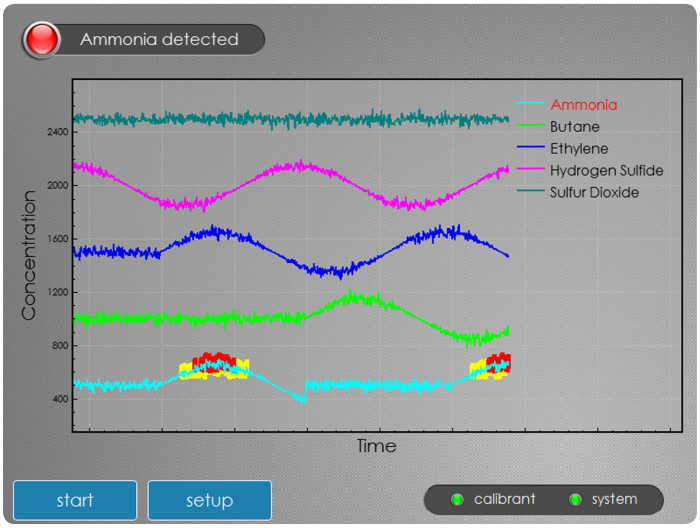
FEATURES

- Real-time monitoring of gas streams
- No carrier gases required
- Continuous monitoring
- Operator controlled or autonomous unattended operation
- Out-of-spec product alarms

EASE OF USE

With our easy to use monitoring software, users can select any ion mass, ratio, or sum that will be monitored in real-time. An easy to view time trace of each chemical will be displayed and recorded. Preprogrammed alarm limits can be set to provide visual and audible alarms when the abundance of a chemical exceeds a preset limit (high or low).





OPTIONS

- **CUSTOM MASS RANGE** - The MMS 2000 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.
- Integrated gas chromatograph
- Touchpanel display
- NEMA 2 & NEMA 4X Enclosures
- 4–20 mA outputs

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