

Product Description



MicroFab has expanded its developments in vapor generation for olfaction to the generation of vapors for calibrating explosives detectors, or other trace-vapor detectors.

A digitally controlled ink-jet dispenser ejects minute amounts of a dilute standard solution which is rapidly converted into vapor upon deposition onto a heater. The amount of vapor delivered to the detector is controlled by the number of drops (dose mode is specified number of drops) or the frequency of the droplet generation (continuous mode is droplets generated continuously at set frequency).

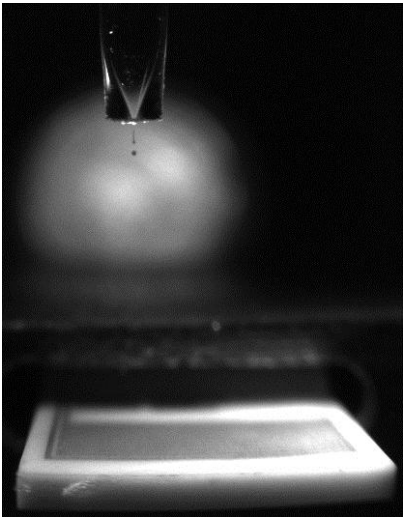
The vapor generator can be used to quantify the detection limit of trace-vapor detectors in the field or in the lab during development.

Standard Features

- Drop-on-Demand (DOD) ink-jet dispensing of the explosive solution.
- JetDrive™ III board with bipolar, sine, and arbitrary waveform modes.
- CCD board based integrated camera for drop and heater observation.
- Glass reservoir for the explosive solution.
- Software controlled temperature profiles.
- Software controlled backpressure for DOD dispensing.
- Collection vial for maintenance or calibration.
- Software controlled mass flow regulator for the carrier gas.

Output Characteristics

- Dose mode or Continuous
- Dosage level controlled by the number of drops (dose) or frequency (continuous) and carrier gas flowrate
- Flow controlled to accommodate different explosive detectors
- Vapors of any explosive that can be put in solution; tested TNT, RDX, PETN
- Three orders of magnitude dynamic range



Applications

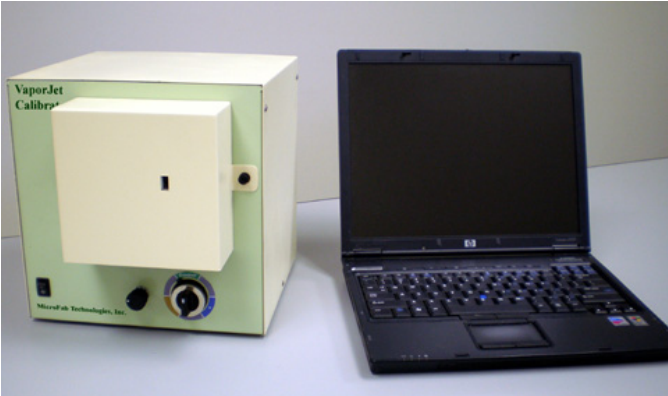
- Evaluation of explosives and other trace-vapor detection technologies
- Calibration and testing of trace-vapor detectors as part of detector manufacturing
- Field calibration and testing of trace-vapor detectors
- Testing the interaction of multiple materials on trace-vapor detectors
- Olfaction threshold determination

Specifications

Subsystem		Standard
Operating Frequency		Up to 30kHz
Dose/Mode Generation Modes		(set drop generation frequency)
Pressure Control		pressure above the dispensed solution -0.5 to 0.5Psi
Carrier Gas Flow Control		available with maximum range: a) 50 cc/min or b) 5 L/min
Heater		fast response heater with ramps of up to 250°C/sec
Temperature Control		Software Controlled with programmable temperature profiles

733Mhz processor, 512MB RAM, 40+ GB hard drive, CD-ROM, Ethernet, 2 uncommitted USB 2.0 ports)	
Visualization	Integrated PC board camera for jet setup
Display	14.1" TFT color low-temperature device; Selectable orifice size
Jet Drive Electronics	Jet Drive™ III: bipolar and arb mode

Additional Information (PDF)



- [Brochure](#)
- [Product Description](#)
- [Technology Background](#)
- Dimensions & Weight
- CAD Machine Views