

# UltraRae

## Compound-specific monitor

**EnviroMed**  
DETECTION SERVICES  
A Division of EnviroMed Analytical Inc.

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UltraRAE is a quick spot-check monitor, typically used by occupational health, safety and environmental personnel. The combination filter tube and PID removes the disadvantages associated with colorimetric tubes and gas chromatographs. Applications include tank entry pre-screening during refinery and plant maintenance, hazardous material response, marine spill response and refinery down-stream monitoring.

Interchangeable RAE-Sep Filter Tubes™ allow the UltraRAE to be compound-specific to :

- Benzene
- Methylene Chloride (Halocarbon)
- Butadiene (Polymer manufacture)

### Key Features

- The only compound-specific monitor with combination of interchangeable separation tubes and PID
- 3 to 10 times faster analysis vs. conventional tube or portable gas chromatograph methods
- Results obtained in seconds (<75 seconds) rather than minutes
- Detects benzene down to 0.1 ppm in 60 sec
- 3,000 - point datalogging storage capacity for data download to PC. Compatible with Windows 98, NT, 2000, XP
- Excellent range and linearity
- Good down to 0.1 ppm and up to over 200 ppm benzene
  - (no more Gas Chromatograph column overload problems)
- More accurate than gas detection tubes

- Internal pump
  - Allows you to sample deep (up to 30ft or 10m) into a confined space
  - Prevents liquid flow into the monitor
  - Warns if sample tubing is blocked or crimped
- Low cost of ownership
  - Inexpensive analysis due to low-cost RAE-Sep™ tubes vs. gas detection tubes
  - Cheaper than portable GC, and no annual factory calibration
- Large keys operable with 3 layers of gloves
- Large easy-to-read backlight display
  - Alarm activated
  - Darkness or manually activated
- Optional vibration alarm
- Snap-in rechargeable or alkaline battery pack, 10 hours of operation with smart battery charging

### Applications

- Benzene
  - Petrochemical
  - Transportation industry - tankers, railways, aircraft and barges
  - Pipelines
  - Military
  - Rubber manufacturers
- Methylene Chloride
  - Paint strippers in industries from airlines to furniture refinishers to ship building
  - Solvents for cleaning chemical tanks
  - Solvents in the manufacture of plastics, flexible foams, sealants and photographic film stock
  - Adhesives in the assembly of plastic parts
- Butadiene
  - Polymers industries
  - Manufacturers of plastics, resin and rubber



INSTRUMENTATION FOR A SAFER, HEALTHIER ENVIRONMENT

# General Specification



## Sensor Specifications

	VOC	Benzene	Halocarbons	Butadiene
Range	0 to 2000 ppm	0 to 200 ppm	0 to 200 ppm	0 to 200 ppm
Resolution	0.1 ppm 0-99.9 ppm 1 ppm 100-2000 ppm	0.1 ppm	0.2 ppm	0.1 ppm
Calibration Gas	100 ppm Isobutylene	5 ppm Benzene	Compound Dependent	5 ppm Butadiene
UV Lamp	9.8, 10.6 or 11.7eV	9.8 eV	11.7 eV	9.8 eV
Inference Rejection	None	300 ppm Toluene*	300 ppm Acetone*	150 ppm Hexane*

## Detector Specifications

Size	7.75"L x 2.75"W x 1.5"H (19.7 x 7.0 x 3.8 cm)
Weight	16 oz with battery pack (455g)
Sensor	Photoionization detector with vacuum UV lamp
Battery	<ul style="list-style-type: none"> <li>Rechargeable snap-in, field-replaceable NiMH battery pack</li> <li>10 hours charge through built-in charger</li> </ul>
Operating Hours	10 hours continuous operation
Display	Large LCD, manual and alarm-activated back light
Keypads	1 operation and 2 programming keys
Alarm	90dB buzzer and flashing LED to indicate exceeded preset limits <ul style="list-style-type: none"> <li>High: 3 beeps and flashes per second</li> <li>Low: 2 beeps and flashes per second</li> <li>User-adjustable alarm limits</li> <li>Optional plug-in pen-size vibration alarm</li> </ul>
Datalogging	<ul style="list-style-type: none"> <li>Standard 3,000 points including sample number, gas reading, time/date, specific vapor</li> <li>Header information includes monitor serial number, user ID and site number</li> </ul>
Communication	Download data to PC and upload instrument setup from PC through RS-232 link to serial port on PC
Calibration	Two-point field calibration of zero and span
Sampling Pump	Internal pump with 400 cc/min flow rate with VOC tube
Hazardous Area Approval	<ul style="list-style-type: none"> <li>US/Canada UL, cUL, Classified as Intrinsically Safe for use in Class I, Division 1 Groups A, B, C, D, Hazardous Locations T6 rating</li> <li>Europe: ATEX II IG EEx ia IIC T4</li> </ul>
Temperature	32° to 113°F (0° to 40°C)
Humidity	0% to 95% relative humidity (non-condensing)
Warranty	1 year on instrument (per RAE Systems Standard Warranty), 1 year 10.6 eV lamp, 1 year pump, 1 year battery

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## Monitor-only Includes:

- Monitor
- RAE Systems UV Lamp
- 10 RAE-Sep bar coded tubes
- Total VOC tube
- Rubber boot with belt clip
- Rechargeable NiMH battery pack
- 120 VAC/DC wall adapter (if specified)
- Alkaline battery adapter
- ProRAE Suite Software package for Windows 98, NT, 2000 and XP
- Computer interface cable
- Operation and maintenance manual
- Soft carrying case

**Part Number: EMC012-7003-000**

## Monitor with accessories kit also includes:

- Hard transport case with pre-cut foam
- Spare rubber connector kit
- Organic vapor zeroing kit
- Gas outlet port and tubing
- Tool kit
- Lamp-cleaning kit

**Part Number: EMC012-0002-000**

## Monitor with calibration kit also includes:

- 5 ppm benzene calibration gas, 34L
- Tedlar bag for calibration
- Regulator (3 liters/minute) and Teflon tubing

**Part Number: EMC012-0000-000**

## Most-Used Accessories:

Calibration Gas (Benzene) - EM17SBA50  
 Organic Vapour Zero Kit - EMC002-0008-000  
 Benzene SepTubes - EMC012-3022-005  
 Humidity Filtering Tubes - EMC025-2002-010  
 Charcoal Effluent Scrubber Kit - EMC012-3004-000

## Total Care Warranty

With the purchase of a new gas monitor from EnviroMed, your Total Care Warranty is included at no extra charge. That's our commitment to you.

- 24-hour Support and Service
- Extra 3-month labour warranty
- Loaner unit available during warranty repair
- Full Warranty Service Center
- Disposal of used EnviroMed cylinders
- Rental units available from our large rental fleet

TRAINING, CALIBRATION, SERVICE, AND REPAIRS ARE LOCALLY AVAILABLE FOR THIS INSTRUMENT AT ENVIROMED'S FULL SERVICE LABORATORY.

ENVIROMED CARRIES A FULL LINE OF SUPPLIES, INCLUDING CALIBRATION GAS, REGULATORS, SAMPLE TUBING, FILTERS AND SPARE PARTS.