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RAE-Sep Tube Data Sheet

Benzene C₆H₆ 

No. 012-3022-005

Compound	Benzene
Standard Lamp	9.8 eV
Typical Range (ppmv)	0.1 - 1000
Sample Time (sec)	60
Sample Volume (mL)	360
Total VOC Capacity (ppmv)	300

Temperature Range: 2 - 40°C (36 - 104°F)

Temp (°C)	2-10	10-15	15-30	30-40
Temp (°F)	36-50	50-60	60-86	86-104
Measure Time (sec)	150	90	60	40
Sample Vol. (mL)	900	540	360	240

Calibration should be performed at the same temperature as the measurement because span changes with temperature.

Humidity: No effect on reading 0 - 95% RH. Humid, clean air drawn through the tube before measurement will reduce VOC capacity.

Storage Life and Conditions: Unopened tubes can be stored for 1 year in darkness at 5 - 25°C (40 - 77°F). Refrigeration is preferred. Open tubes should be used within one hour to avoid loss of capacity.

Color Change: Yellow → Brown → Green
The benzene reading may be high if the green color extends to more than ¾ of the length. The tube may still have some capacity if there is no green color.

Note: It is preferable to recalibrate when changing batches. For more details on tube operation see Technical Note 136.

Caution: Dispose of spent or expired tubes according to local regulations. Each tube contains about 3 mg of chromium compounds. **Do not draw humid air for extended periods, or any liquid water, through the tubes, as corrosive liquids may damage unit.**

<u>Cross-sensitivity:</u> Substance	Test Conc. (ppmv)*	Apparent Benzene Response
Toluene	400	0.1
p-Xylene	200	0.0
Ethylbenzene	200	0.0
Styrene	100	0.0
Nitrobenzene	100	0.0
Phenol	100 [#]	0.0
Chlorobenzene	20	2.5
Dichlorobenzene	50	0.1
Hydrogen Sulfide	150	0.0
Methane	25000**	0.0
Propane	1000	0.0
Isobutane	100	0.0
Isobutylene	500	0.0
n-Pentane	1500	0.0
1,3-Butadiene	300	0.0
n-Hexane	100 [#]	0.0
Cyclohexane	10	0.4
n-Octane	300	0.1
β-Pinene	50	0.0
Ethanol	50	0.0
Isopropanol	100	0.0
Acetone	100	0.0
Cyclohexanone	200	0.0
Tetrahydrofuran	100	0.0
Methyl t-butyl ether	100	0.0
Ethyl acetate	100	0.0
Acrylonitrile	100	0.0
Epichlorohydrin	100	0.0
Trichloroethylene	100	66
Perchloroethylene	50	38

*Not necessarily the maximum allowable conc.

** No effect on tube capacity. Propane and higher hydrocarbons do affect capacity.

[#] Higher concentrations may cause a reduced benzene response.