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RAE-Sep Tube Data Sheet

Butadiene (Polymer) C_4H_6 No. 012-3024-005

Compound	Butadiene
Standard Lamp	9.8 eV
Typical Range (ppmv)	0.1 - 200
Sample Time (sec)	75
Sample Volume (mL)	550
Total VOC Capacity (ppmv)	150

Temperature Range: 5 - 40°C (41 - 104°F)

Temp (°C)	5-18	18-30	30-40
Temp (°F)	41-64	64-86	86-104
Measure Time (sec)	180	75	50
Sample Vol. (mL)	1500	600	400

Calibration should be performed at the same temperature as the measurement.

Humidity: 0 - 95% RH.

RH	<5%	50%	80%
Correction Factor (CF)	1.0	1.5	1.6

When calibrated from a dry gas cylinder, multiply the reading by the CF to obtain the true value.

Color Change: None

Storage Life and Conditions: Unopened tubes can be stored for 2 years in darkness at 0 - 40°C (32 - 104°F). Open tubes may be stored for up to 8 hours in clean air without significant loss of capacity.

Note: For more details on tube operation see Technical Note 147.

Cross-sensitivity:

Substance	Test Conc. (ppmv)*	Apparent Butadiene Response
Acrylonitrile	100	0.0
Styrene	100	0.0
Ethylbenzene	200	0.0
Toluene	100	0.2
Toluene	200	2
Benzene	10	0.3
Benzene	100	7
Methane	25000**	0.0
Methyl Bromide#	5	3#
Propane	1000	0.0
Isobutane	100	0.0
Isobutylene	50	40
n-Hexane	200	0.0
Cyclohexane	50	0.5
Vinyl Chloride##	40	17
1,2-Dichloroethane	40	0
Vinylidene Chloride	40	20
Trichloroethylene	40	0
Perchloroethylene	40	0

*Not necessarily the maximum allowable conc.

** Methane above 1% by volume reduces the PID response, but has no effect on tube capacity. Butane and higher hydrocarbons reduce tube capacity.

Methyl bromide can be measured using a 10.6 eV lamp and a 60 sec. sampling time at room temperature. Adjust time at other temperatures proportionately.

Vinyl chloride can be measured using a 10.6 eV lamp and a 30 sec. sampling time at room temperature. Adjust time at other temperatures proportionately. 1,2-DCA, TCA, TCE, and PCE do not interfere. 1,1-DCE gives about a 30% cross-sensitivity to the vinyl chloride measurement.

Caution: Dispose of spent or expired tubes according to local regulations. Used tubes may contain toxic chemicals absorbed from the test environment. Unused tubes contain no hazardous or leachable materials.