

Butadiene(Polymer) C₄H₆


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.

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

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

*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 capacity.

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

‡ Ammonia can be measured using a 10.6 eV lamp and a 75 sec. sampling time at room temperature. Calibrate with NH₃ gas.

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.