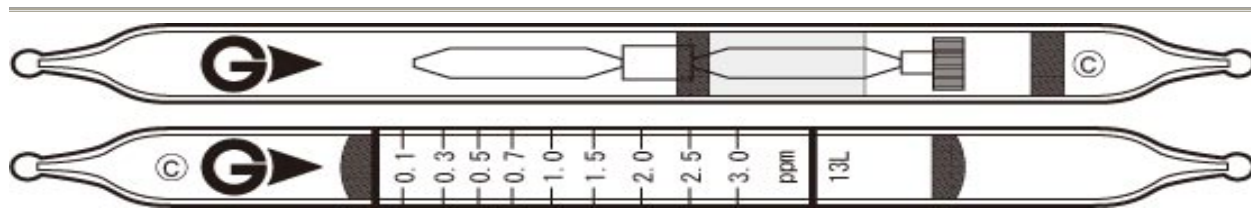


# Carbon disulfide

CS<sub>2</sub>

NO.13L



## Performance

<b>Measuring Range</b>	0.1 to 3.0 ppm	3.0 to 8.1 ppm
<b>Number of Pump Stroke</b>	2	1
<b>Correction Factor</b>	1	2.7
<b>Sampling Time</b>	2 minutes per pump stroke	
<b>Detecting Limit</b>	0.05 ppm (n=2)	
<b>Colour Change</b>	Bluish purple → White	
<b>Reaction Principle</b>	$\text{CS}_2 + \text{CrO}_3 + \text{H}_2\text{S}_2\text{O}_7 \rightarrow \text{SO}_2 + \text{CO}_2$ $\text{SO}_2 + \text{I}_2 + \text{H}_2\text{O} \rightarrow \text{HI} + \text{H}_2\text{SO}_4$	
<b>Coefficient of Variation</b>	10% (for 0.1 to 1.0 ppm), 5% (for 0.1 to 3.0 ppm)	
<b>Shelf Life</b>	2 Years	
<b>Corrections for temperature &amp; humidity</b>	Temperature correction is necessary	
<b>Store the tubes at cool and dark place.</b>		

## Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Chloroform	≥150ppm	Plus error	Produces white stain
Carbon tetrachloride	≥50ppm	Plus Error	Produces white stain
o-Dichlorobenzene	20ppm	Minus Error	None ≤20ppm
Dichloromethane	≥100ppm	Plus Error	Produces white stain
Tetrachloroethylene	≥80ppm	Plus Error	Produces white stain
Trichloroethylene	≥10ppm	Plus Error	Produces white stain
Hydrogen sulphide	≥50ppm	Plus Error	None (≤50ppm)
Acetone	750ppm	No Effect	None
Ethyl acetate	200ppm	No Effect	None
Toluene	40ppm	No Effect	None
n-Hexane	100ppm	No Effect	None
Methanol	300ppm	No Effect	None
Methyl ethyl ketone	250ppm	No Effect	None

## Calibration gas generation Diffusion tube method

TLV-TWA	TLV-STEL	Explosive range
1ppm	-	1.3 to 50%