

Uniphos Detector Tube Data Sheet

Direct Reading Length of Stain Type

Mercaptans

R-SH

SEM-4L

TLV (TWA): 0.5 ppm

TLV (STEL): ----

Flammable Range: 3 - 18%

Specification:

Measurement Range	Extended	Standard	Extended
	0.5- 5 ppm	5-120 ppm	120- 240 ppm
No. of Pump Strokes	2 to 10 (200 to 1000 mL)	1 (100 mL)	0.5 (50 mL)
Volume Correction Factor (VCF)*	0.5 to 0.1	1.0	2.0
Sampling Time	1.5 minutes per pump stroke (100 mL)		
Color Change	Yellow → Pink		
Shelf Life	2 years		
Storage condition	Below 10°C (50°F)		
Calibration condition	Calibrated with Ethyl Mercaptan at 20°C (68°F) and 50% RH.		
Reaction Principle	$C_2H_5SH + HgCl_2 \rightarrow C_2H_5S.HgCl + HCl$ $HCl + Base \rightarrow Chloride$		
Relative standard deviation	± 10 -15 %		

* Multiply the observed reading by the correction factor (VCF) to obtain the true concentration.

Possible Interferences:

Compound	Concentration (ppm)	Interference	Colour change / Comments
Other Mercaptans		+	Pink
Phosphine		+	Pink
Hydrogen Sulphide	120	No	No Effect
Arsine		+	Pink
Hydrogen Cyanide		+	Pink
Carbon Dioxide	10%	No	No effect
Ammonia	100	No	No effect
Sulphur Dioxide	30	No	No effect

Other measurable compounds:

Compound	Correction Factor	No. of pump strokes	Measuring range
Methyl Mercaptan	1	1	5 - 120 ppm
t-Butyl Mercaptan	1	1	5 - 120 ppm

Correction for Environmental Parameters:

Temperature	Not necessary between 0 - 40°C (32 - 104°F).
Relative humidity	Not necessary between 10 - 90 %.



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