

Arsine

AsH₃

NO.19LA



Performance

Measuring Range	0.04 to 0.1ppm	0.1 to 1.5ppm	1.5 to 2.4 ppm	2.4 to 10 ppm
Number of Pump Stroke	10	5	3	1
Correction Factor	0.4	1	1.6	6.7
Sampling Time	1.5 minutes per pump stroke			
Detecting Limit	0.02 ppm (n=10)			
Colour Change	Yellow → Red			
Reaction Formula	Arsine reacts with mercuric chloride to produce hydrogen chloride. The indicator of the tube turns to red. $AsH_3 + 3HgCl_2 \rightarrow As(HgCl)_3 + 3HCl$ $HCl + \text{Basic compound} \rightarrow \text{chloride compounds}$			
Coefficient of Variation	10% (for 0.1 to 0.5 ppm), 5% (for 0.5 to 1.5 ppm)			
Shelf Life	2 Years			
Corrections for temperature & humidity	Unnecessary			
Store the tubes at cool and dark place.				

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Change colour by itself
Hydrogen chloride	-	No effect	No stain by itself
Diborane	-	No effect	No stain by itself
Phosphine	$\geq 1/10$ time	Plus error	Discolours red stain

Calibration gas generation High pressure gas cylinder method

TLV to TWA	TLV to STEL	Explosive range
0.0 5ppm	-	-