

Gastec Tube Datasheet

Phosphine

PH₃

NO.GAS7



Performance

Measuring Range	2.5 to 5 ppm	5 to 50 ppm	50 to 100 ppm
Pump Strokes	4	2	1
Correction Factor	1/2	1	2
Sampling Time	1.5 minutes per pump stroke		
Detecting Limit	0.5 ppm (n = 4)		
Colour Change	White → Pale yellow		
Reaction Principle	Phosphine reacts with mercuric chloride to produce Mercuric Phosphochloride which is pale yellow in colour. $2\text{PH}_3 + 6\text{HgCl}_2 + 3\text{H}_2\text{O} \longrightarrow \text{Hg}_3\text{P}_2 \cdot 3\text{HgCl}_2 + 3\text{H}_2\text{O} + 6\text{HCl}$		
Coefficient of Variation	10% (for 5 to 10 ppm), 5% (for 10 to 50 ppm)		
Shelf Life	Up to 3 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
Arsine	20 ppm	Plus error	Produces brown stain
Hydrogen Selenide	20 ppm	Plus error	Produces brown stain
Hydrogen Sulphide	10 ppm	Plus error	Produces dark brown stain

Calibration gas generation High pressure gas cylinder method

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