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# Gas Detection Tube Data Sheet

## Phosphine PH<sub>3</sub> No. 10-116-20

	Extended Range	Standard Range	Extended Range
Range (ppmv)	12.5 - 250	25 - 500	50 - 1000
No. of Pump Strokes	2	1	0.5
Sample Volume (mL)	200	100	50
Sample Time (min)	2 x 1.5	1.5	1
Correction Factor	0.5	1	2

Precision (Relative Standard Deviation)\*:  $\leq \pm 12\%$

Linearity with No. of Pump Strokes:  $r^2 = 0.99$

Humidity: No effect 5 - 80% RH.

Temperature Range: 0 - 40°C  
(32 - 104°F)

Temp (°C/°F)	0/32	10/50	24/75	40/104
Corr. Factor	0.85	0.95	1.0	1.15

Storage Life: 1 year in darkness at 5 - 25°C (40 - 77°F). Refrigeration preferred.

Color Change: White → Yellow

Reaction Principle:  $2\text{PH}_3 + 6\text{HgCl}_2 + 3\text{H}_2\text{O} \rightarrow \text{Hg}_3\text{P}_2 \cdot 3\text{HgCl}_2 \cdot 3\text{H}_2\text{O} + 6\text{HCl}$

<u>Cross-sensitivity:</u> Substance	Concentration (ppmv)	Apparent Reading*
H <sub>2</sub> S	50	35 (brown)
SO <sub>2</sub>	200	0
NO	100	0
NH <sub>3</sub>	100	0
CO	250	0
CO <sub>2</sub>	50000	0
CH <sub>4</sub>	25000	0
Hexane	1500	0
Toluene	100	0

\*Data based on RAE pumps and tubes used in standard range.

Other Possible Interferences: Strongly reducing gases.

Caution: Dispose of spent or expired tubes according to local regulations.  
Possibly hazardous materials are given under the section Reaction Principle.