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# Gas Detection Tube Data Sheet

## Ammonia NH<sub>3</sub> No. 10-100-15

	Extended Range	Standard Range	Extended Range
Range (ppmv)	12 - 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	1	1
Correction Factor	0.56	1	2

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

Linearity with No. of Pump Strokes:  $r^2 = 0.998$

Humidity: No effect at 10 - 90% RH. At <5% RH multiply the reading by 0.8.

Temperature Range: 0 - 40°C  
@ 50%RH (32 - 104°F)

Temp (°C/°F)	0/32	10/50	24/75	40/104
Corr. Factor	1.3	1.0	1.0	1.2

Storage Life: 2 years in darkness at 3 - 10°C (37 - 50°F). Refrigeration required.

Color Change: Purple → Beige

Reaction Principle: Prelayer reduces humidity effects  
 $3\text{NH}_3 + \text{H}_3\text{PO}_4 \rightarrow (\text{NH}_4)_3\text{PO}_4$

<u>Cross-sensitivity:</u> Substance	Concentration (ppmv)	Apparent Reading*
Butylamine	300 <sup>#</sup>	200
Diethylamine	100 <sup>#</sup>	90
CO	250	0
CO <sub>2</sub>	50000	0
H <sub>2</sub> S	250	0
SO <sub>2</sub>	500 <sup>#</sup>	0 <sup>†</sup>
NO <sub>2</sub>	200	0
CH <sub>4</sub>	25000	0
Hexane	1500	0
Toluene	200	0
Isobutylene	5000	0

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

<sup>#</sup>At 50% RH. <sup>†</sup>Reduces reading in mixtures

Other Possible Interferences: Amines and other bases

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