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Gas Detection Tube Data Sheet

Ammonia NH_3 No. 10-100-05

	Extended Range	Standard Range	Extended Range
Range (ppmv)	0.5 - 15	1 - 30	2 - 60
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	0.55	1	2.4

Precision (Relative Standard Deviation)*: ≤ ± 12%

Linearity with No. of Pump Strokes: $r^2 = 0.999$

Humidity: The tubes are calibrated at 50% RH. @ 24 °C (75 °F)

% RH	< 5%	10%	50%	80%	95%
Corr. Factor	0.8	0.85	1.0	1.0	1.0

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

Temp (°C/°F)	0/32	10/50	25/77	35/95
Corr. Factor	0.9	0.95	1.0	1.1

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

Color Change: Purple → Beige

Reaction Principle: $3NH_3 + H_3PO_4 \rightarrow (NH_4)_3PO_4$

Cross-sensitivity: Substance	Concentration (ppmv)	Apparent Reading*
Pyridine	10	15
Diethylamine	20	18
Hydrazine	20	2**
Methylhydrazine	20	2.3**
CO	100	0
CO_2	20000	0#
H_2S	200	0
Hexane	100	0
Isobutylene	100	0
Toluene	100	0

* Data based on RAE pumps and tubes used in standard range.
** These hydrazines can be measured using 2 strokes with a CF of 5.
# 16000 ppm CO_2 reduces the NH_3 response by 30% in mixtures, 5000 ppm CO_2 reduces NH_3 response by 10% in mixtures, and 1000 ppm CO_2 has no effect.

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.