Gas Detection Tube Data Sheet Hydrogen Sulfide H₂S No. 10-103-05

	Extended Range	Standard Range	Extended Range
Range (ppmv)	0.1 – 1.5	0.2 - 3	0.4 - 6
No. of Pump Strokes	2	1	0.5
Sample Volume (mL)	200	100	50
Sample Time (min)	2 x 2	2	1
Correction Factor	0.5	1	2

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

<u>Linearity with No. of Pump Strokes</u>: $r^2 = 0.999$

Humidity: No effect between 5 - 90% RH.

Temperature Range: No effect between 0 - 40°C (32 - 104°F).

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

<u>Color Change</u>: Pale orange \rightarrow Pink

Reaction Principle: Pretube eliminates humidity

 $H_2S + HgCl_2 \rightarrow Mercury sulfide product + HCI$

 $HCI + Base \rightarrow Chloride Salt + H₂O (dye color change)$

Cross-sensitivity: Substance	Concentration (ppmv)	Apparent Reading*
Methyl mercaptan	3	0#
Butyl mercaptan	3	0#
NH ₃	100	0
NO ₂	5	0
SO ₂	100	0
CS ₂	100	0
СО	250	0
Hexane	100	0
Isobutylene	100	0^
Toluene	100	0

^{*}Data based on RAE pumps and tubes used in standard range.

Other Possible Interferences: HCl and other acids.

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

[#] Interferes at higher concentrations.

[^] Reduces response when mixed with H₂S.