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Gas Detection Tube Data Sheet

Hydrogen Sulfide H₂S No. 10-103-04

| | 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 1.5 | 1.5 | 1 |
| Correction Factor | 0.5 | 1 | 2 |

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

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

Humidity: Tubes must be used @ <5% RH. Reading drops sharply above 5% 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.

Color Change: Pale orange → Pink

Reaction Principle: $H_2S + HgCl_2 \rightarrow$ Mercury sulfide product + HCl

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

| Cross-sensitivity: Substance | Concentration (ppmv) | Apparent Reading* |
|---------------------------------|-------------------------|----------------------|
| Methyl mercaptan | 2 | 0.4 |
| Butyl mercaptan | 2 | 0.3 |
| NH ₃ | 100 | 0 |
| NO ₂ | 5 | 0 |
| SO ₂ | 100 | 0 |
| CS ₂ | 100 | 0 |
| CO | 250 | 0 |
| Hexane | 100 | 0 |
| Isobutylene | 100 | 0 [^] |
| Toluene | 100 | 0 |

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

[^] Reduces response when mixed with H₂S.

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