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Gas Detection Tube Data Sheet

Carbon Dioxide CO₂ No. 10-104-50

| | Extended Range | Extended Range | Standard Range |
|---------------------|----------------|----------------|----------------|
| Range (ppmv) | 0.25 - 5% | 0.5 - 10% | 1 - 20% |
| 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 | 0.25 | 0.5 | 1 |

Precision (Relative Standard Deviation)*: $\leq \pm 10\%$

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

Humidity: No effect 5 - 100% RH

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

Storage Life: 2 years in darkness at 5 - 25°C (40 - 77°F). Refrigeration preferred.

Color Change: White → Purple

Reaction Principle: $\text{CO}_2 + \text{H}_2\text{NNH}_2 \rightarrow \text{H}_2\text{NNHCO}_2\text{H}$ (pH indicator change)

| <u>Cross-sensitivity:</u> Substance | Concentration (ppmv) | Apparent Reading* |
|--|-------------------------|----------------------|
| CO | 3000 | 0 |
| SO ₂ | 200 | 0 |
| NO | 100 | 0 |
| NH ₃ | 300 | 0 |
| CH ₄ | 25000 | 0 |
| H ₂ S | 100 | 0 |
| Hexane | 1200 | 0 |
| Isobutylene | 100 | 0 |
| Toluene | 100 | 0 |

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

Other Possible Interferences: Acid gases

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