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# Gas Detection Tube Data Sheet

## Carbon Dioxide CO<sub>2</sub> No. 10-104-30

|                     | Extended Range | Standard Range | Extended Range |
|---------------------|----------------|----------------|----------------|
| Range               | 150-2500       | 300-5000       | 600-10000      |
| No. of Pump Strokes | 2              | 1              | 0.5            |
| Sample Volume (mL)  | 200            | 100            | 50             |
| Sample Time (min)   | 2 x 2          | 2              | 1.5            |
| Correction Factor   | 0.5            | 1              | 2              |

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

Linearity with No. of Pump Strokes:  $r^2 = 0.993$

Humidity: No effect 5 - 85% RH

Temperature Range: 0 - 40°C  
(32 - 104°F)

| Temp (°C/°F) | 0/32 | 10/50 | 21/70 | 40/104 |
|--------------|------|-------|-------|--------|
| Corr. Factor | 0.90 | 0.95  | 1.0   | 0.95   |

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

Color Change: White → Purple

Reaction Principle: CO<sub>2</sub> + H<sub>2</sub>NNH<sub>2</sub> → H<sub>2</sub>NNHCO<sub>2</sub>H (pH indicator change)

| <u>Cross-sensitivity:</u><br>Substance | Concentration<br>(ppmv) | Apparent<br>Reading* |
|--|-------------------------|----------------------|
| CO                                     | 3000                    | 0                    |
| SO <sub>2</sub>                        | 2050                    | 500                  |
| SO <sub>2</sub>                        | 200                     | ~50                  |
| NO                                     | 100                     | 0                    |
| NH <sub>3</sub>                        | 50,000                  | 0                    |
| H <sub>2</sub> S                       | 2000                    | 0                    |
| Hexane                                 | 1500                    | 0                    |
| Isobutylene                            | 100                     | 0                    |
| Toluene                                | 400                     | 0                    |

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

Other Possible Interferences: Acid gases. Ammonia does not interfere in mixtures.

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