Tube No. NX107L



1 PERFORMANCE

1) Measuring range : 1-20 ppm 0.5-10 ppm 0.25-5 ppm 0.2-4 ppm Number of pump strokes : 1 (100mL) 2 (200mL) 4 (400mL) 5 (500mL)

2) Sampling time : 1.5 minutes / 1 pump stroke

3) Detectable limit : 0.05 ppm (500mL)

4) Shelf life : 1 year (Necessary to store in refrigerated conditions ; $0\sim10^{\circ}$ C)

5) Operating temperature : 0~40°C

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")
7) Reading : Direct reading from the scale calibrated by 1 pump stroke

8) Color change : Yellow→Red

2. RELATIVE STANDARD DEVIATION

RSD-low: 10% RSD-mid.: 5% RSD-high: 5%

3. CHEMICAL REACTION

By decomposing with an Oxidizer, Hydrogen Cyanide is produced. Hydrogen Cyanide reacts with Mercuric Chloride, then Hydrogen Chloride is liberated and pH indicator is discolored.

CH₂=CHCN+CrO₃+H₂SO₄→HCN

HCN+HgCl₂→HCI

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

5. INTERFERENCE AND CROSS SENSITIVITY

| Substance | ppm | Interference | Coexistence |
|------------------|-------------------|----------------------------|---|
| Butadiene | Less than 350 ppm | | The accuracy of readings is not affected. |
| Toluene | Less than 600 ppm | | ıı . |
| Hexane | Less than 800 ppm | | " |
| Styrene | Less than 720 ppm | | " |
| Hydrogen Cyanide | | Similar stain is produced. | Higher readings are given. |

(NOTE)

In case of 2 to 5 pump strokes, following formula is available for actual concentration.

Actual concentration = Temperature corrected value × 1/Number of pump strokes

TEMPERATURE CORRECTION TABLE

| Tube | Corrected Concentration (ppm) | | | | | |
|-------------------|-------------------------------|------------------|------------------|------------------|-------------------|--|
| Readings (ppm) | 0 °C (32 °F) | 10 °C (50 °F) | 20 °C (68 °F) | 30 °C (86 °F) | 40 °C (104 °F) | |
| 20 | 26.0 | 22.5 | 20.0 | 18.0 | 17.0 | |
| 18 | 23.0 | 20.0 | 18.0 | 16.5 | 15.5 | |
| 16 | 20.5 | 18.0 | 16.0 | 15.0 | 14.0 | |
| 14 | 18.0 | 15.5 | 14.0 | 13.0 | 12.0 | |
| 12 | 15.5 | 13.5 | 12.0 | 11.0 | 10.5 | |
| 10 | 13.0 | 11.0 | 10.0 | 9.5 | 9.0 | |
| 8 | 10.5 | 9.0 | 8.0 | 7.5 | 7.0 | |
| 6 | 8.0 | 7.0 | 6.0 | 6.0 | 5.5 | |
| 4 | 5.5 | 4.5 | 4.0 | 4.0 | 4.0 | |
| 2 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| 1 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 | |

