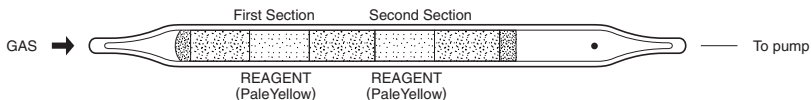


CARBON MONOXIDE



1. PERFORMANCE

- 1) Measuring range : 10-1,000 ppm
This tube is calibrated based on the sampling time not related with number of pump strokes.
- 2) Sampling time : 0.5-5.0 minutes
- 3) Detectable limit : 10 ppm (5.0 minutes)
- 4) Shelf life : 3 years
- 5) Operating temperature : 0 ~ 40 °C
- 6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")
- 7) Reading : Colour intensity method using colour standard chart shown in below
- 8) Colour change : Pale yellow → Green to Blue

2. RELATIVE STANDARD DEVIATION

RSD-low : RSD-mid. : RSD-high :

3. CHEMICAL REACTION

Molybdate is reduced and molybdeum blue is produced.



4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

| Substance | Interference | ppm | Coexistence |
|-----------------------|----------------------------------|-------|---|
| Nitrogen dioxide | | 1 | Lower readings are given. |
| Hydrogen sulphide | Blue or Black stain is produced. | 1,000 | Black stain is produced and higher readings are given. |
| Ethylene | ∕ | 5 | ∕ |
| Hydrogen (over 40 °C) | | 10% | Whole reagent is discoloured to Blue and higher readings are given. |

6. NOTE

- In case of determining CO concentration, it is necessary to take a waiting time related to the sampling time and ambient temperature. After the waiting time, compare the second section of reagent with the colour standard chart.
- In case of spontaneous combustion of coal mines, Ethylene and CO are produced. The first section is partially stained to deep blue from the top of the section according to Ethylene concentration. Whole areas of first and second sections are equally stained to Greenish blue according to CO concentration. The first section is available to detect less than 5 ppm of Ethylene.

TEMPERATURE CORRECTION TABLE

| Temperature | 0 °C (32 °F) | 5 °C (41 °F) | 10 °C (50 °F) | 15 °C (59 °F) | 20 °C (68 °F) | 25 °C (77 °F) | 30 °C (86 °F) | 35 °C (96 °F) | 40 °C (104 °F) |
|-------------------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| Waiting time (minute) | 5 | 5 | 3 | 2 | 2 | 1 | 1 | 1 | 1 |
| Sampling time up to 1 minutes | 7 | 7 | 4 | 3 | 3 | 2 | 1 | 1 | 1 |
| Sampling time of 2 minutes | | | | | | | | | |
| Chart Readings (ppm) | | | | | | | | | |
| 100 | 400 | 250 | 150 | 100 | 70 | 50 | 40 | 30 | 20 |
| 200 | 800 | 500 | 300 | 200 | 140 | 100 | 70 | 50 | 40 |
| 300 | 1,200 | 800 | 450 | 300 | 200 | 150 | 100 | 80 | 60 |
| 600 | 2,300 | 1,500 | 900 | 600 | 400 | 300 | 200 | 150 | 120 |
| 1,000 | 3,900 | 2,500 | 1,500 | 1,000 | 700 | 500 | 300 | 250 | 200 |

Color Standards for CARBON MONOXIDE

