Tube No.
117SA

# NITROGEN DIOXIDE

## 1. PERFORMANCE

1) Measuring range : 20-1,000ppm
   Number of pump strokes 1 (100mL)
2) Sampling time : 2 minutes / 1 pump stroke
3) Detectable limit : 1 ppm
4) Shelf life : 3 years
5) Operating temperature : 0～40℃
6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION COEFFICIENT TABLE")
7) Operating himidity : 0～100%R.H.
8) Reading : Direct reading from the scale calibrated by 1 pump stroke
9) Colour change : White → Green

## 2. RELATIVE STANDARD DEVIATION

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

## 3. CHEMICAL REACTION

By reacting with Diphenylamine, N-Nitrosodiphenylamine is produced.

$NO_2 + (C_6H_5)_2NH \rightarrow (C_6H_5)_2NNO$

## 4. CALIBRATION OF THE TUBE

PERMEATION TUBE METHOD

## 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance | ppm | Interference | ppm | Coexistence |
|---|---|---|---|---|
| Chlorine | — | The accuracy of readings is not affected. | — | The accuracy of readings is not affected. |
| Bromine | — | 〃 | — | 〃 |
| Iodine | — | 〃 | — | 〃 |
| Hydrogen chloride | — | 〃 | — | 〃 |
| Sulphur dioxide | — | 〃 | — | 〃 |
| Ozone | 10 | Brown stain is produced. | 15 | Lower readings are given. |

TEMPERATURE CORRECTION COEFFICIENT TABLE

Temperature ; To correct for temperature, multiply the tube reading by the following factors.

| Temperature(℃) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Correction Factor | 0.90 | 0.91 | 0.91 | 0.92 | 0.92 | 0.93 | 0.93 | 0.94 | 0.94 | 0.95 |
| Temperature(℃) | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| Correction Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Temperature(℃) | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| Correction Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Temperature(℃) | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| Correction Factor | 1.05 | 1.05 | 1.06 | 1.06 | 1.07 | 1.07 | 1.08 | 1.08 | 1.09 | 1.09 |
| Temperature(℃) | 40 | | | | | | | | | |
| Correction Factor | 1.10 | | | | | | | | | |