# **NITROGEN DIOXIDE**



#### 1. PERFORMANCE

4) Shelf life  $\therefore$  2 years  $\therefore$  5) Operating temperature  $\therefore$  0  $\sim$  40 °C

6) Temperature compensation : Necessary (30  $\sim$  40°C) (See "TEMPERATURE CORRECTION TABLE") 7) Reading : Direct reading from the scale calibrated at the sampling of 200m $\ell$ /min  $\times$  20min

8) Colour change : White → purple-red

# 2. RELATIVE STANDARD DEVIATION

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

#### 3. CHEMICAL REACTION

By reacting with 3,3'-Dimethylnaphthidine, Nitroso compound is produced.  $NO_2 + C_{22}H_{20}N_2 \rightarrow Purple$  red reaction products

#### 4. CALIBRATION OF THE TUBE

PERMEATION TUBE METHOD

### 5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Sulphur dioxide		0.3	Lower readings are given.
Ozone		0.2	"
Carbon monoxide			The accuracy of readings is not affected.
Carbon dioxide			"
Nitrogen monoxide			"
Formaldehyde			"
Toluene			"
Xylene			"
Ethyl benzene			"
Styrene			"
p-Dichlorobenzene			"
Acetone			"

## (NOTE)

Air sampler is required for this tube.

#### TABLE OF THE COEFFICIENT FOR TEMPERATURE CORRECTION

Temperature(℃)	31	32	33	34	35	36	37	38	39	40
Correction factor	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20