# **FORMALDEHYDE**

# DETECTOR TUBE | CONTROL | CONTROL

#### 1. PERFORMANCE

1) Measuring range : 0.01-0.12 ppm 0.04-0.48 ppm 2) Sampling time : 300mℓ/min × 30min 300mℓ/min × 10min

3) Detectable limit :  $0.005 \text{ ppm} (300 \text{m} \ell \times 30 \text{min})$ 

4) Shelf life : 1 year (Necessary to store in refrigerated conditions ;  $0 \sim 10 \, ^{\circ}\mathrm{C}$ )

5) Operating temperature :  $10 \sim 35 \,^{\circ}\text{C}$ 

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")

7) Reading : Direct reading from the scale calibrated at the sampling of  $300 \text{m} \ell \times 30 \text{min}$ 

8) Colour change : Yellowish orange→Pink

## 2. RELATIVE STANDARD DEVIATION

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

## 3. CHEMICAL REACTION

By reacting with Hydroxylamine phosphate, Phosphoric acid is liberated. HCHO + (NH<sub>2</sub>OH)<sub>3</sub>⋅ H<sub>3</sub>PO<sub>4</sub>→ H<sub>3</sub>PO<sub>4</sub>+ HCN = NOH + H<sub>2</sub>O

# 4. CALIBRATION OF THE TUBE

ABSORPTIOMETRIC METHOD

#### 5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Ammonia	The accuracy of readings is not affected.	0.5	Discolouration layer fades from the bottom of stained layer.
Amines	"	0.5	"
Nitrogen dioxide	Similar stain is produced.	0.5	Higher readings with indiscernible maximum end point of stained layer are given.
Acetaldehyde	"		Higher readings are given.
Acetone	"		"

#### (NOTE)

Air sampler is required for this tube.

#### TABLE OF THE COEFFICIENT FOR TEMPERATURE CORRECTION (20 °C standard)

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Temp(°C)	0	1	2	3	4	5	6	7	8	9
10	1.40	1.36	1.32	1.28	1.24	1.20	1.16	1.12	1.08	1.04
20	1.00	0.97	0.94	0.91	0.88	0.85	0.82	0.79	0.76	0.73
30	0.70	0.67	0.64	0.61	0.58	0.55		_		_