Tube No.
713

FORMALDEHYDE

1. PERFORMANCE

1) Measuring range : 0.01～0.50 ppm (12.5～625 μg/m³)
2) Sampling volume : 3.5L (350mL/min×10min)
3) Sampling time : 10 minutes
4) Detectable limit : 0.005 ppm
5) Shelf life : 1 year (Necessary to store in refrigerated conditions ; 0～10℃)
6) Operating temperature : 10～35℃
7) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")
8) Operating humidity : 5～90%R.H.
9) Reading : Direct reading from the scale calibrated at sampling volume of 350mL×10min
10) 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.

$HCHO + (NH_2OH)_3 \cdot H_3PO_4 \rightarrow H_3PO_4 + HCN = NOH + H_2O$

4. CALIBRATION OF THE TUBE

DNPH-HPLC METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Ammonia	The accuracy of readings is not affected.	1.0	Discolouration layer fades from the inlet side of the stain.
Amines	〃	1.0	〃
Ethanol	〃	200	Higher readings are given.
Nitrogen dioxide	Similar stain is produced.	1.0	Higher readings with indiscernible maximum end point of the stain are given.
Acetaldehyde	〃		Higher readings are given.
Acetone	〃		〃

(NOTE)

1) Air sampler is required for this tube.

TEMPERATURE CORRECTION TABLE

Tube Readings (ppm)	True Concentration (ppm)					
	10℃ (50°F)	15℃ (59°F)	20℃ (68°F)	25℃ (77°F)	30℃ (86°F)	35℃ (95°F)
0.50	-	0.780	0.500	0.390	0.340	0.290
0.40	0.900	0.520	0.400	0.310	0.270	0.230
0.30	0.550	0.370	0.300	0.230	0.200	0.170
0.20	0.330	0.250	0.200	0.155	0.135	0.115
0.10	0.150	0.120	0.100	0.080	0.070	0.060
0.05	0.070	0.060	0.050	0.040	0.035	0.030
0.01	0.020	0.015	0.010	0.008	0.007	0.006