

GASTEC Instructions for No.91PL Formaldehyde Detector Tube

FOR SAFE OPERATION :

Read this manual and the instruction manual of your Gastec Air Sampling Pump carefully.

⚠ CAUTION : If not observed, injuries to the operator or damage to the product may result.

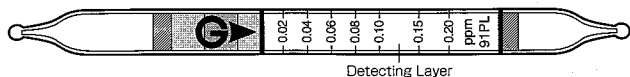
1. When breaking the tube ends, keep away from eyes.
2. Do not touch the broken glass tubes, pieces and reagent with bare hand(s).

△ NOTES : For maintaining performance and reliability of the test result

1. Recommend to use Gastec Gas Sampling device Model GSP-300FT-2 (if not available use the air sampler of equivalent to sample for 200 ml/min) together with Gastec Detector Tubes only for the purposes specified in the instruction manual of the detector tube.
2. Use this tube under the temperature range of 5 - 35°C (41 - 95°F).
3. Use this tube under the relative humidity range of 20 - 90%.
4. This tube may be interfered by the coexisting gases. Please refer to the "INTERFERENCES".
5. If this tube is used 15°C (59°F) or below for 10 minutes, the test result may erroneously lower than the true concentration.
6. Shelf life and storage condition of the tube is marked on the label of the box of tube.

APPLICATION OF THE TUBE : Use this tube for the detection of Formaldehyde in air of environmental atmospheric condition.

SPECIFICATION : (As a result of Gastec's commitment to continued improvement, specifications are subject to change without notice.)



Measuring Range	0.02- 0.20 ppm	0.2 - 1.20 ppm
Sampling Rate	200 ml/min	200 ml/min
Correction Factor	1	6
Sampling Time	30 min	10 min
Detection Limit	0.01 ppm (6,000 ml)	
Color Change	Pale Yellow - Pink	
Reaction Principle	Formaldehyde reacts with hydroxylamine phosphate to liberate phosphoric acid which discolors pH indicator to pink.	

**** Shelf Life :** Please refer to the Validity Date printed on the box of tube.

**** Store the tubes in the refrigerator to keep at 10°C (50°F) or below.**

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Temperature : Correct for temperature by the table below:

		1(°C)									
10(°C)	0	—	—	—	—	—	2.30	2.10	1.97	1.85	1.75
	10	1.65	1.55	1.48	1.42	1.35	1.30	1.25	1.20	1.10	1.05
	20	1.0	0.96	0.92	0.87	0.83	0.80	0.76	0.73	0.70	0.67
	30	0.65	0.63	0.60	0.58	0.56	0.55	—	—	—	—

Humidity : No correction is required for 20 - 90% R.H.
Pressure : To correct for pressure, multiply by the tube reading by

$$\frac{\text{Tube Reading (ppm)} \times 1013 (\text{hPa})}{\text{Atmospheric Pressure (hPa)}}$$

MEASUREMENT PROCEDURE :

If automatic air sampler Model GSP-300FT-2 is used

1. Prior to operation please confirm if black color inlet rubber tube holder is equipped with the sampler.
2. Break both end of the tips of the detector tube by the tube tip holer supplied. Connect the detector tube to the pump with arrow (G) on the tube pointing toward pump.
3. Set the flow meter at 200 ml/min and timer to "30 minutes" of the sampler. Press the power switch of the sampler to start the sampling.
4. After the sampling, remove the detector tube from the sampler.
5. Read the concentration from the length of discoloration of the tube. If the discoloration exceeded the 0.2 ppm level, prepare fresh detector tube. Reset the sampler at flow rate of 200 ml/min and "10 minutes" of the timer and start the sampling again.
6. If correction is needed, after sampling, multiply the correction factor of the temperature, sampling volume and pressure respectively.

INTERFERENCES :

Substance	Concentration	Interference	Change color by itself
Ammonia	≤2 ppm	No effect	No discoloration
Nitrogen dioxide	≤1 ppm	No effect	No discoloration
Acetaldehyde		Plus error	Pink
Acetone	≤0.3 ppm	No effect	Pink at inlet
Ethyl Alcohol		No effect	No discoloration
Ethyl Acetate		No effect	No discoloration
p-Dichlorobenzene		No effect	No discoloration
Toluene		No effect	No discoloration

Scrubber (Black color) : Removes acetone.

Scrubber (Purple color) : Removes ammonia and nitrogen dioxide. Ammonia discolors purple scrubber color to yellow. Nitroben dioxide discolors purple stain to dark purple.

The table of this interference gases primarily expresses the interference of each coexisting gas in the gas concentration range, equivalent to the gas concentration. Therefore, the test result may be given positive result by the other substances not listed in the table. For more information is needed please contact us distributors in your territory.

DISPOSAL INSTRUCTION : Reagent of the tube does not use toxic substance. On disposing the tube regardless of used or unused, follow the rules and regulations of the local government.

WARRANTY : If you have any questions regarding gas detection and quality of the tubes, please feel free to contact your Gastec representatives.

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