


 p-Dichlorobenzene 730 DETECTOR TUBES

★ READ CAREFULLY THIS INSTRUCTION MANUAL AND THE INSTRUCTIONS OF MODEL S-20 AIR SAMPLER SERIES PRIOR TO USING THIS PRODUCT.

### CAUTION FOR SAFETY

- 1) SAFETY GLASSES AND GLOVES SHOULD BE WORN TO PREVENT INJURY FROM SPLINTERING GLASS.
- 2) DETECTING REAGENT AND REMOVER CONTAIN SMALL AMOUNT OF CHEMICALS. IN CASE OF CONTACT WITH THE CONTENTS OF BROKEN TUBE, WASH OFF SKIN THOROUGHLY WITH WATER.
- 3) KEEP THE TUBES OUT OF THE REACH OF CHILDREN.

### CAUTION FOR USE

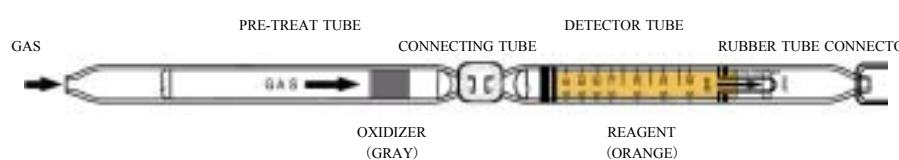
- 1) STORE TUBES IN A COOL AND DARK PLACE (0°C - 25°C / 32 - 77°F) AND USE BEFORE EXPIRY DATE PRINTED ON TOP OF THE BOX.
- 2) DETECTOR TUBE AND PRE-TREAT TUBE ARE MANUFACTURED IN PAIRS; USE THEM IN PAIRS WHICH ARE IN THE SAME BOX.
- 3) READ CONCENTRATION IMMEDIATELY AFTER MEASUREMENT BECAUSE THE STAINED LAYER GETS LONGER GRADUALLY.

### USE

THIS TUBE IS FOR QUANTITATIVE ANALYSIS OF VERY SMALL AMOUNT OF INDOOR p - Dichlorobenzene vapour.

T.L.V. : Japan : 10 ppm ( 60 mg / m<sup>3</sup> ) (2002) U.S.A. 10 ppm (2002)

### SPECIFICATIONS



Measuring Range	0.01 - 0.4 ppm
Sampling Volume	3 ℓ ( 200 ml/min × 15 min )
Colour Change	Orange → Reddish Purple
Detectable Limit	0.002 ppm
Operating temperature	10 - 35 °C (50 - 95°F) (Temperature correction is necessary.)
Operating humidity	0 - 90 % RH (Not affected by humidity)
Chemical reaction	Detection of acid formed by oxidization of lead oxide with pH indicator

### INTERFERENCE AND CROSS SENSITIVITY

Substance	Single existence		Coexistence	
	Conc. (ppm)	Influence	Conc. (ppm)	Influence
Trichloroethylene	-	Similar stain is produced.	-	Higher readings are given.
Tetrachloroethylene	-	Similar stain is produced.	-	Higher readings are given.
1,2-Dichloroethylene	-	Similar stain is produced.	-	Higher readings are given.
Vinyl chloride	-	Similar stain is produced.	-	Higher readings are given.

### OPERATION

- ① Break both ends of detector tube with ampoule cutter provided, and connect detector tube with connecting tube or tube connector of Model S-20 Air Sampler series as shown in illustration in SPECIFICATIONS.
- ② In accordance with Instruction manual of each air sampler, preset TIMER (Hours) at 15 minutes and adjust sampling volume at 200 ml/min.
- ③ After completion of sampling (15 minutes), remove the detector tube and read the scale at the top of the stained layer.
- ④ When using in other temperature circumstances than 25 °C (77°F), correct readings after getting a temperature correction coefficient from the following table.

\* With regard to sampling and measuring procedure, it depends on each model of air sampler, therefore read instruction manual of each instrument carefully and make a measurement.

### CONVERSION OF CONCENTRATION UNIT

Conversion of concentration unit is obtained according to the following formula.

$$\text{Measured concentration (} \mu\text{g / m}^3\text{)} = 6012 \times \text{Measured concentration (ppm)} \quad (\text{at } 25 \text{ }^\circ\text{C} (77^\circ\text{F}))$$

### CORRECTION FOR AMBIENT CONDITIONS

Temperature : Readings obtained in other temperature circumstances than 25 °C (77°F) should be corrected with the following temperature correction table.

Temp(°C)	0	1	2	3	4	5	6	7	8	9
10	2.63	2.41	2.20	2.01	1.85	1.70	1.58	1.47	1.37	1.30
20	1.23	1.17	1.14	1.09	1.04	1.00	0.96	0.93	0.90	0.89
30	0.86	0.85	0.84	0.84	0.83	0.81	-	-	-	-

(Procedure of temperature correction)

Actual reading can be obtained by multiplying reading of tubes by coefficient for temperature correction shown in above table.

Actual p-Dichlorobenzene concentration (ppm)

$$= \text{reading value (ppm)} \times \text{Coefficient for temperature correction}$$

Procedure to get coefficient for temperature correction from the table.

In case of temperature of 23 °C, the arrow pointed 1.09 which is found by proportional allotment of 20 °C and 3 °C in the table is the coefficient for temperature correction.

Temp(°C)	0	1	2	3	4
10	2.63	2.41	2.20	2.01	1.85
20	1.23	1.17	1.14	1.09	1.04
30	0.86	0.85	0.84	0.84	0.83

Humidity : Not affected at 10 - 90 % RH

Atmospheric pressure : Correction for atmospheric pressure can be made by the following formula.

$$\text{Reading value (ppm)} \times 1013 \text{ (hPa)} \div \text{Atmospheric pressure at measuring point}$$

### DISPOSAL OF TUBE

This detector tube does not include hazardous substance.

Dispose of them as "rubbish of glass and of ceramics" in general wastes or industrial wastes.

This pre-treat tube includes 22 mg of hazardous substance, lead compound per tube.

Dispose of them as "rubbish of glass and of ceramics contained lead compound.

※ SPECIFICATIONS & APPEARANCE ARE SUBJECT TO CHANGE WITHOUT ANY PREVIOUS NOTICE FOR IMPROVEMENT OF PERFORMANCE.

※※ PLEASE FEEL FREE TO HAVE A CONTACT WITH US IF YOU HAVE ANY QUESTION AGAINST PRODUCTS OR GAS MEASUREMENT.

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