

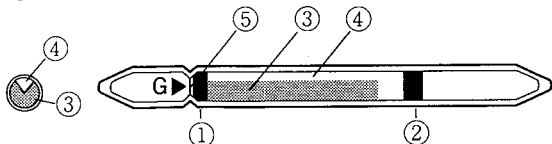
## GASTEC

### # 8D PASSIVE DOSIMETER TUBE FOR CHLORINE

#### GENERAL:

The Gastec Passive Dosimeter Tube No.8D provides the measurement of the mean value of CHLORINE in air by the principle of diffusion sampling. No air sampling equipment such as aspiration pump, motor driven air sampler is needed for the measurement. The calibration marks printed on each tube indicates PPM x Hour and averaged concentration can be available by dividing the sampling time measured.

#### PERFORMANCE:



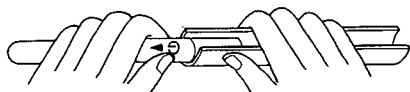
- 1 & 2 Upper and Lower End Plug Packing
- 3 Diffuser
- 4 Analyzing Reagent
- 5 Score

Calibration Scale	2—50 ppm·hour			
Color Change	White—Yellow			
Measuring Range	4—100 ppm	2—50 ppm	0.2—5 ppm	0.08—20.8 ppm
Sampling Time	30 min.	1 hour	10 hours	24 hours
Detecting Limit	—	—	—	0.1 ppm

#### SHELF LIFE:

Please refer to the term of validity of a label of a Detector Tube Box.

#### OPERATING PROCEDURE:



- 1 Prepare Passive Dosimeter Tube and Dosi-Tube Holder No.710.
- 2 Record the measurement starting time on the peel off numbered label in each box of the tube and put the label on the tube.
- 3 Break the tube at the score of the tube with Gastec Passive Dosi-Tube Holder. Insert a part of the tube in the tube holder where the tube can be broken at the score and break the tube carefully. Remove the broken part of the tube and discard it carefully from the tube holder.

- 4 Insert the analyzing tube end into the tube holder. For personal sampling, put the dosi-tube holder to the shirt collar of the personnel or workplace where the measurement is required.
- 5 To protect the tube holder of shirt collar from dropping during operation, support the tube holder with string through a small hole of the tube holder.
- 6 Measurement concentration can be obtained from 1/2 hour sampling. 4—10 hours sampling time is recommended.
- 7 When the sampling is finished, record the time on the label of the tube and calculate the actual sampling time.
- 8 The averaged gas concentration can be obtained by the following formula:  

$$\text{Average Concentration (ppm)} = \frac{\text{Dosi-Tube Reading (ppm} \cdot \text{hours)}}{\text{Actual Sampling Time}}$$

#### CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE:

Calibration of Gastec Dosimeter Tube No.8D is based on a tube temperature of 20°C (68°F) and approximately 50% relative humidity, and normal atmospheric pressure.

- (1) No correction is required for tube temperature of 0-40°C (32-104°F)
- (2) No humidity correction for 0-90% relative humidity range is required.
- (3) No pressure correction is required.

#### DETECTION PRINCIPLE:

Cl<sub>2</sub> + o-Tolidine → Yellow product

#### INTERFERENCES:

Substance	Concentration	Interference	Changes color by itself to
Halogens	≥ 1/2	+	} Yellow
Nitrogen dioxide	≥ 1/2	+	

#### DANGEROUS AND HAZARDOUS PROPERTIES:

Threshold Limit Value-Time Weighted Average (TLV-TWA) by ACGIH (1996) : 0.5ppm(7—8hours)  
 Threshold Limit Value-Short Term Exposure Limit (STEL) by ACGIH (1996) : 1ppm(15minutes)

STORE THE TUBES BELOW 25°C (77°F) AND DARK PLACE.