

#2HT

GASTEC

CARBON DIOXIDE ULTRA HIGH RANGE DETECTOR TUBE

The Gastec Detector Tube No.2HT provides a rapid, fully quantitative analysis of the concentration of CARBON DIOXIDE in air with a minimum accuracy tolerance of $\pm 25\%$ utilizing the Gastec Special Syringe Type Pump.

The measurement is accurately recorded for direct reading on calibration scale printed on each tube when sampling is introduced at a constant flow rate, into the Detector Tube.

PERFORMANCE :

Calibration Scale	(10) — 100% (based on 20 ml)
Measuring Range	10 — 100%
Sample Volume	20 ml
Detectable Limit*	2%
Sampling Time	20 sec
Color Change	White — Purple

* Minimum Detectable Concentration.

SHELF LIFE :

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

MEASUREMENT PROCEDURE :



1. Break tips off a fresh detector tube by bending each tube end in the tube tip breaker (metal plate) supplied in the detector kit.
2. Pull the pump handle of syringe and take sample 20 ml until the piston head attains the mark "20".
3. Insert the tube end, marked with the arrow, securely into the syringe pump.
4. Introduce the sample air in 20 sec at a constant flow rate into the detector tube.
5. Read concentration at the interface of the stained-to-unstained reagent when staining stops after completion of the procedure #4.

CORRECTION FOR TEMPERATURE, HUMIDITY AND PRESSURE :

Calibration of the Gastec detector tube No.2HT is based on a tube temperature of 20°C (68°F) and not the temperature of the gas being sampled, approximately 50% relative humidity and normal atmospheric pressure.

No correction is required for relative humidity range of 0—100% and for tube temperature of 0—40°C (32—104°F).

To correct for pressure, multiply tube reading by

$$\frac{760}{\text{Atmospheric Pressure (mmHg)}}$$

CALIBRATION AND ACCURACY :

The Gastec detector tube No.2HT is carefully calibrated as an integral part of the manufacturing process. Calibration and accuracy test are performed using combination of standard reference gas of known concentration and dynamic gas flow system and gas chromatographic technique.

DETECTION PRINCIPLE :

Carbon dioxide reacts with hydrazine to form carbonic acid monohydrazide, which discolors redox indicator (crystal violet) to purple.



INTERFERENCES :

Other gases and vapors do not give any effect on tube reading.

DANGEROUS AND HAZARDOUS PROPERTIES :

Threshold Limit Value—Time Weighted Average by ACGIH (1996) : 5,000 ppm (7—8 hours)

Threshold Limit Value—Short Term Exposure Limit (STEL) by ACGIH (1996) : 30,000 ppm (15 minutes)

SEE OPERATING INSTRUCTIONS INCLUDED IN THE CARBON DIOXIDE DETECTOR KIT.

Manufacturer : Gastec Corporation
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