

#100B

GASTEC

## PROPANE DETECTOR TUBE

The Gastec Detector Tube No. 100B provides a rapid, fully quantitative analysis of the concentration of PROPANE in air with a minimum accuracy of  $\pm 25\%$  utilizing the Gastec Special Propane Detector Pump.

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

## PERFORMNCE:

Calibration Scale (Measuring Range)	0.1-2.0%
Color Change	Brown - Blackish Green
Sample Volume to be taken	20 ml
Sample Flow Rate	1 ml/6 sec

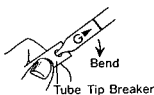
## SHELF LIFE:

Please refer to the term of validity on a Tube Box Label.

## 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 until the piston head attains the 0 sec (20 ml) mark on the cylinder wall and take 20 ml sample exactly into the detector pump.
3. Insert the tube end, marked with the arrow, securely into the pump.
4. Introduce the sample air in 120 sec at a constant flow rate of 1 ml/6 sec 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 TEMPERATRE, HUMIDITY OR PRESSURE:

Calibration of the Gastec detector tube No. 100B 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 10-90% and for tube temperatures of 20°-40°C(68°-104°F). For tube temperatures of -10°C-20°C(14°-68°F), tube reading must be corrected according to the Temperature Correction

Table below:

Temperature Correction Table

No. 100B

Tube Reading (%)	True Concentration (%)			
	-10°C (14°F)	0°C (32°F)	10°C (50°F)	20°C (68°F)
2.0	0.95	1.4	1.8	2.0
1.5	0.7	1.05	1.4	1.5
1.0	0.4	0.7	0.9	1.0
0.5	0.15	0.3	0.45	0.5
0.2	0.05	0.13	0.16	0.2

For tube temperatures of 20°-40°C (68°-104°F), no correction is needed.

To correct for pressure, multiply tube reading by

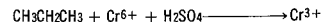
$$\frac{760}{\text{Atmospheric Pressure (mmHg)}}$$

## CALIBRATION AND ACCURACY:

The Gastec detector tube No. 100B is carefully calibrated as an integral part of the manufacturing process. Calibration and accuracy test are performed using combinations of standard reference gas of known concentrations and dynamic gas flow system, and gas chromatographic technique.

## DETECTION PRINCIPLE:

Propane reduces potassium dichromate to form chromic sulfate, which is blackish green in color.



## INTERFERENCES:

Substance	Concentration	Interference	Changes color by itself to
Organic solvents ( $\geq \text{C}_3$ )		+	Dark green

## DANGEROUS AND HAZARDOUS PROPERTIES:

Explosive range in air: 2.2-9.5%

SEE OPERATING INSTRUCTIONS INCLUDED IN THE PROPANE DETECTOR KIT.

Manufacturer: Gastec Corporation  
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971-100B-1  
Printed in Japan