S	tyrene C6H5C	CH:CH2		© No.124L
C		25 25 25 25 25 25 25 25 25 25 25 25 25 2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	Scale G>		-20- -25- ppm n=4 124L	
Per	rformance			
	Measuring range	2 to	25 ppm	25 to 100 ppm
	Number of pump strokes	4 (4	00 mL)	1 (100 mL)
	Correction factor	1		4
	Sampling time	2 mi	n	30 sec
	Detecting limit :	0.5 ppm (4 pump strokes)		
	Colour change :	White → Yellow		
	Relative standard deviation : 10 % (for 2 to 5 ppm), 5 % (for 5 to 25 ppm) Tube quantity and number of tests per box : 10 tubes for 10 tests Shelf life : 36 months			
Rea	action principle C6H5CH:CH2 + H2S2O7 - ssible coexisting substances	 Condensation and their interview 	on polymer erferences	
	Substance	Concentratio	n Interference	Changes colour by itself t
	Butadiene Alcohols Aldehydes Esters Ketones	\ge 5 ppm \ge 10 times \ge 10 times \ge 10 times \ge 10 times	+ (Bleaching)	Blackish brown
Oth	ner substance measurable v	vith this deteo	tor tube	
	Substance	Correction	No. of pump strol	kes Measuring range
	Divinyl benzene	Factor : 0.6	3	1 to 15 ppm
Cal	ibration gas generation			

(18) Special note

A very low level concentration (0.2 to 4 ppm) of styrene can be measured by a Gastec special detector tube (No.124S) that is available with the Gastec Odorant Analysis System.

① Name and chemical formula

The name of the substance to be measured with this detector tube and its chemical formula.

2 Detector tube number

The identification number of the detector tube.

③ External appearance

In the case of a Single Tube, photographs show a Detector Tube before use and after use. For Twin Tubes, photographs show a Pretreatment Tube and Detector Tube before use, and a Detector Tube after use.

Also, an illustration shows the magnified portion of the Detector Tube scale in high contrast.

The actual products may differ slightly from the pictures shown.



④ Measuring range

The range of the substance concentrations that can be measured with the detector tube. The standard measuring range, or range of the printed calibration scale is given in the shaded box. Some lower limit values of the standard measuring ranges are parenthesized when they are not printed on the tubes but only their scale lines are printed.

(5) Number of pump strokes

The number of pump strokes required for measuring a given range of concentrations. The volume to be sampled with those strokes is given in the parentheses. The standard pump strokes and the standard sampling volume are given in the shaded box. With most Gastec detector tubes, the standard pump strokes are prescribed as I (the standard sampling volume is 100 mL).

6 Correction factor

When measuring an extended range of concentration, that is, when the measurement is performed with other than the standard number of pump strokes, the tube reading should be corrected by multiplying the reading by the prescribed correction factor.

⑦ Sampling time

The total waiting time to read the detector tube. (=A waiting time for 100 mL (or 50 mL) \times n. (Number of pump strokes))

⑧ Detecting limit

The lower limit of the substance concentration that the detector tube can detect. This minimal concentration can be recognized by a slight colour change at the entrance of the detecting layer. This value is followed by the parenthesized number of pump strokes required for measuring this concentration.

(9) Colour change

Indicates how the detecting layer of the detector tube will change its colour by the reaction with the target substance. This is shown in the form of:

Original colour → Changed colour

10 Operating environmental conditions

The Detector Tube temperature range and humidity range are shown. If the Detector Tube is affected by temperature or humidity it is necessary to correct the Detector Tube reading. Refer to each Detector Tube Instruction Manual for the correction method.

(1) Relative standard deviation

An indicator of the accuracy of the detector tube. It represents how the tube indications may deviate from their mean value in percentage: Relative standard deviation = $\frac{\text{Standard deviation (}\sigma)}{\text{Mean value (}\tilde{\chi})} \times 100 \,(\%)$

1 Detector Tube quantity and the number of tests per box

The Detector Tube quantity and the number of tests per box are shown. The number of tests per box will be different for single tubes and twin tubes.

13 Shelf life

The period that Gastec will warrant the quality of the detector tubes, provided that they are stored under the prescribed conditions.

14 Reaction principle

The chemical reaction of the target substance with the reagent(s) in the detector tube is briefly stated.

(5) Possible coexisting substances and their interferences

Substances that are liable to coexist with the target substance and their influences on the tube indications are listed here. The column "Concentration" lists the lowest concentration that may affect the indication \pm 10 % or more, or the highest concentration that is assured of no influence to such extent. These concentration levels are expressed either as quantitative ratios of interferences to the target substance (e.g., $\geq 1/5$, ≥ 2 times) or concentrations of interferences themselves (e.g., \geq 3%, \leq 500ppm). Where, \geq reads "equal to or higher than" and \leq reads "equal to or lower than". The presumed influence by coexistence is given in the column "Interference" where the " + " sign suggests 10% or higher indication, the " - " sign expresses - 10% or lower indication, or "No" means no influence. "Bleaching" means that this interference will cause the reaction colour to be pale. For your reference, the column "Changes colour by itself to" is given to show how the interferences will change the colour of the detecting layer if they exist without the presence of the target gas. "No" represents that no colour change will be observed. The table of interference gases primarily expresses the interference of each coexisting gas in the gas concentration range, equivalent to the gas concentration by some of the other coexisting gases or vapours mentioned from the main purposes of using the detector tube. Therefore, the test result may be given positive result by the other substance not listed in the table. If more precise information is needed, please contact us or our distributors in your territory.

(6) Other substance (s) measurable with this detector tube (Correction Factor/Chart)

Detector tubes are primarily designed to measure specific gases. But it is also possible to measure other substances of similar chemical properties with the aid of a correction factor or chart. A correction factor is a figure which is multiplied by the concentration interpreted form the colour starting on the detector tube. The correction may also be presented as a chart on tube if the correction relationship is nonlinear. Therefore, please make use of the correction factor/chart measuring range as a reference. Moreover, this factor may vary slightly between production batches. For a more precise factor please contact your Gastec distributor.

17 Calibration gas generation

The method of generating the calibration gas that is used for calibrating the detector tube or testing its accuracy.

18 Special note

Other important information about the detector tube is provided, if any.