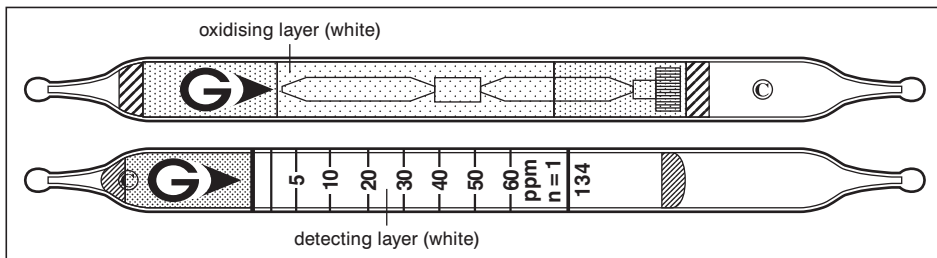


Carbon Tetrachloride CCl_4

No.134



When used, these tubes are to be connected.

Performance The minimum scale value (2.5ppm) is not printed on the tube, but only the scale line is printed.

Measuring range	0.5 to 2.5 ppm	(2.5) to 60 ppm
Number of pump strokes	2 to 5 (200 to 500 ml)	1 (100 ml)
Correction factor	1/2 to 1/5	1
Sampling time	2 to 5 min	1 min

Detecting limit : 0.2 ppm (5 pump strokes)
 Colour change : White → Yellow
 Corrections for temperature & humidity : Unnecessary
 Relative standard deviation : 15 % (for 2.5 to 20 ppm), 10 % (for 20 to 60 ppm)
 Shelf life : 1 year (in the refrigerator)

Reaction principle

Pretreatment tube : $\text{CCl}_4 + \text{I}_2\text{O}_5 + \text{H}_2\text{S}_2\text{O}_7 \rightarrow \text{COCl}_2$

Detector tube : $\text{COCl}_2 + (\text{CH}_3)_2\text{NC}_6\text{H}_4\text{CHO} \rightarrow (\text{CH}_3)_2\text{NC}_6\text{H}_4\text{CHCl}_2$
 $(\text{CH}_3)\text{NC}_6\text{H}_4\text{CHCl}_2 + (\text{C}_6\text{H}_5)_2\text{NH} \rightarrow \text{Yellow product}$

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Bromine, Chlorine	≥ 50 ppm	+	Yellow
Hydrogen chloride	≥ 100 ppm	+	
Methyl bromide	≥ 100 ppm	+	
1,1,1-Trichloroethane	≥ 100 ppm	+	
Chloroform		No	No
Methylene chloride		No	
Tetrachloroethylene		No	
Trichloroethane		No	
Vinyl chloride		No	

Other substance measurable with this detector tube

Substance	Correction	No. of pump strokes	Measuring range
Chloropicrin	Factor : 1.0	1	2.5 to 60 ppm

Calibration gas generation

Diffusion tube method