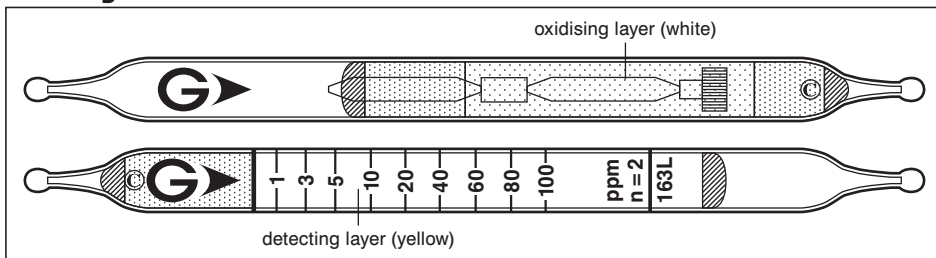


Ethylene Oxide C_2H_4O

No. 163L



Performance

When used, these tubes are to be connected.

Measuring range	0.4 to 1 ppm	1 to 100 ppm	100 to 350 ppm
Number of pump strokes	4 (400 ml)	2 (200 ml)	1 (100 ml)
Correction factor	0.4	1	3.5
Sampling time	12 min	6 min	3 min

Detecting limit : 0.1 ppm (4 pump strokes)

Colour change : Yellow → Reddish brown

Corrections for temperature & humidity : Temperature correction is necessary.

Relative standard deviation : 15 % (for 1 to 20 ppm), 10 % (for 20 to 100 ppm)

Shelf life : 1 year (in the refrigerator)

Reaction principle

Pretreatment tube : $C_2H_4O + \text{Oxidiser} \rightarrow 2HCHO$

Detector tube : $3HCHO + (NH_2OH)_3H_3PO_4 \rightarrow H_3PO_4$

$H_3PO_4 + \text{Base} \rightarrow \text{Phosphate}$

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Aldehydes		+	} Reddish brown
Ketones		+	

Other substances measurable with this detector tube

Substance	Correction	No. of pump strokes	Measuring range
Epichlorohydrin	Factor : 1.2	2	1.2 to 120 ppm
Propylene oxide	Factor : 1.0	1	1 to 100 ppm

Calibration gas generation

Permeation tube method