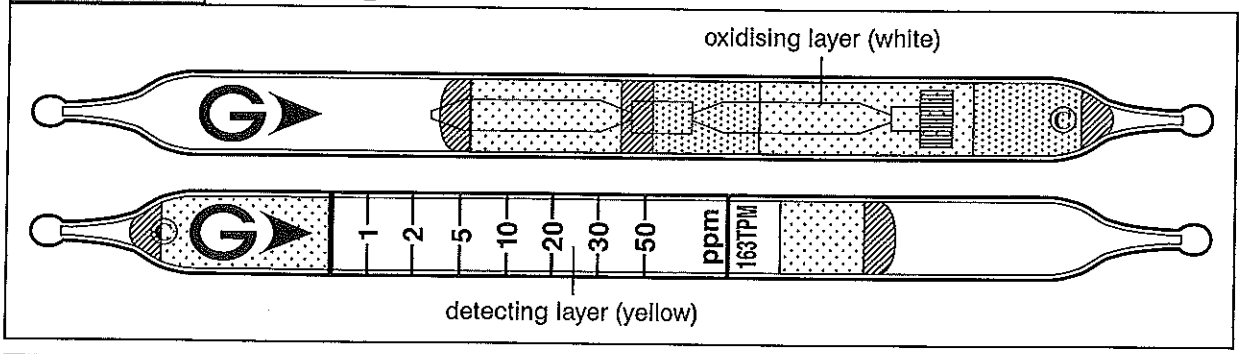
Detector tube

Ethylen Oxide C_2H_4O No.163TPM



Performance

Measuring range	1 to 50 ppm
Sampling Rate	50 ml/min (500 ml)
Correction factor	1
Sampling time	10 min

Detecting limit : 0.1 ppm (500 ml)
Colour change : Yellow → Reddish brown
Corrections for temperature : Necessary for 0 to 40°C
Corrections for humidity : Unnecessary for R.H. 0 to 90 %
Relative standard deviation : 10 % (for 2 to 20 ppm), 5 % (for 20 to 80 ppm)
Shelf life : 1 year (in the refrigerator)

Reaction principle

Pretreatment tube : C_2H_4O + Oxidiser → 2HCHO
Detector tube : $3HCHO + (NH_2OH)_3H_3PO_4 \rightarrow H_3PO_4$
H_3PO_4 + Base → Phosphate

Possible coexisting substances and their interferences (NOTE : Page 2-5)

Substance	Concentration	Interference	Changes colour by itself to
Acetaldehyde	3.5 ppm	+	Reddish brown
Alcohols	300 ppm	−	No
Ketones	8.5 ppm	+	Reddish brown
Formaldehyde	5.0 ppm	+	Reddish brown

Calibration gas generation

Permeation tube method

TLV-TWA : 1 ppm

Explosive range : 3.6 to 100 %