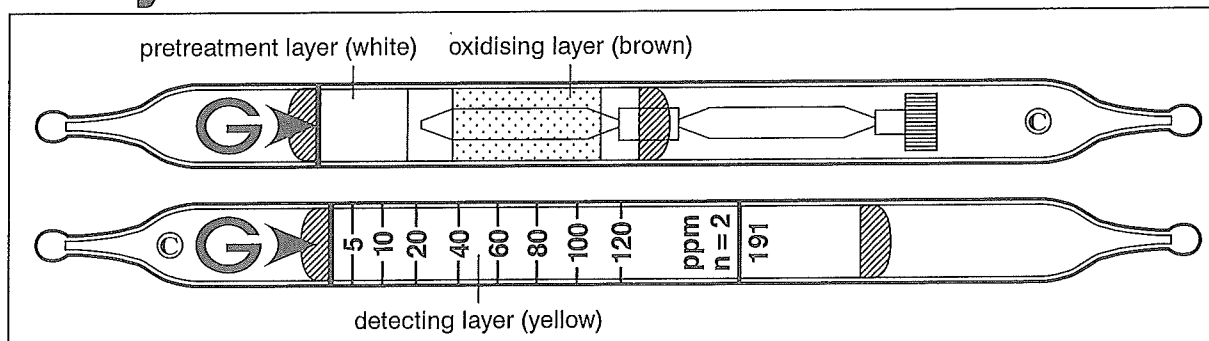


Acrylonitrile CH₂:CHCN

No. 191



Performance

When used, these tubes are to be connected. See page 2-3.

Measuring range	2 to 5 ppm	5 to 120 ppm	120 to 360 ppm
Number of pump strokes	4 (400 ml)	2 (200 ml)	1 (100 ml)
Correction factor	0.4	1	3
Sampling time	3 min	1.5 min	45 sec

Detecting limit : 1 ppm (4 pump strokes)
 Colour change : Yellow → Red
 Corrections for temperature & humidity : Temperature correction is necessary.
 Relative standard deviation : 10 % (for 5 to 40 ppm), 5 % (for 40 to 120 ppm)
 Shelf life : 3 years

Reaction principle

Pretreatment tube : $\text{CH}_2:\text{CHCN} + \text{Cr}^{6+} + \text{H}_2\text{SO}_4 \rightarrow \text{HCN}$

Detector tube : $2\text{HCN} + \text{HgCl}_2 \rightarrow 2\text{HCl}$
 $\text{HCl} + \text{Base} \rightarrow \text{Chloride}$

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

Substance	Concentration	Interference	Changes colour by itself to
Acetone cyanohydrin	≥ 10 ppm	+	} Red
Nitriles ($\geq \text{C}_3$)	≥ 10 ppm	+	
Alcohols, Esters, Ketones		No	} No
Aromatic hydrocarbons		No	
Hydrogen chloride		No	
Hydrogen cyanide		No	

Chlorine, hydrogen chloride, hydrogen cyanide, nitric acid and water vapour are trapped in the white layer in the pretreatment tube.

Other substance measurable with this detector tube

Substance	Correction	No. of pump strokes	Measuring range
Propionitrile	Factor : 10	4	50 to 1200 ppm

Calibration gas generation

Diffusion tube method