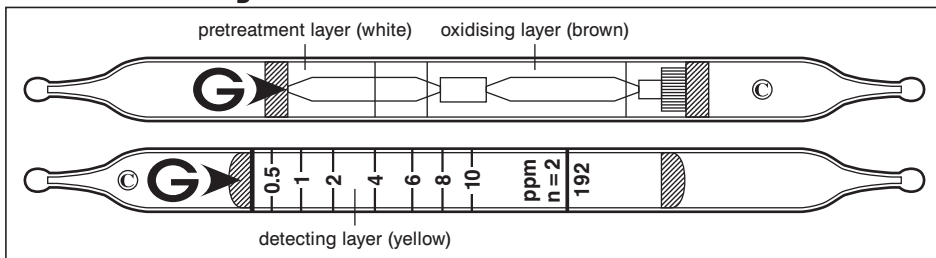


Methacrylonitrile $\text{CH}_2\text{:C}(\text{CH}_3)\text{CN}$ No.192



Performance

When used, these tubes are to be connected.

Measuring range	0.2 to 0.5 ppm	0.5 to 10 ppm	10 to 32 ppm
Number of pump strokes	4 (400 ml)	2 (200 ml)	1 (100 ml)
Correction factor	0.4	1	3.2
Sampling time	8 min	4 min	2 min

Detecting limit : 0.1 ppm (4 pump strokes)
 Colour change : Yellow → Red
 Corrections for temperature & humidity : Unnecessary
 Relative standard deviation : 10 % (for 0.5 to 10 ppm)
 Shelf life : 3 years

Reaction principle

Pretreatment tube : $\text{CH}_2\text{:C}(\text{CH}_3)\text{CN} + \text{Cr}^{6+} + \text{H}_2\text{SO}_4 \rightarrow \text{HCN}$

Detector tube : $2\text{HCN} + \text{HgCl}_2 \rightarrow 2\text{HCl} + \text{Hg}(\text{CN})_2$

$\text{HCl} + \text{Base} \rightarrow \text{Chloride}$

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Acetone cyanohydrin		+	} Red
Nitriles ($\geq \text{C}_3$)		+	
Alcohols, Esters, Ketones	≥ 20 ppm	-	} No
Aromatic hydrocarbons	≥ 20 ppm	-	

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

Calibration gas generation

Diffusion tube method