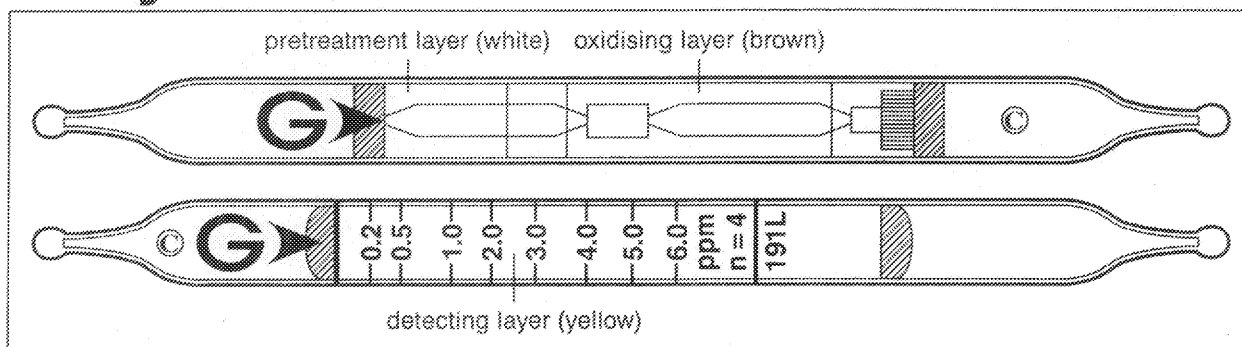


# Acrylonitrile CH<sub>2</sub>:CHCN

No. 191L



## Performance

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

Measuring range	0.1 to 0.2 ppm	0.2 to 6 ppm	6 to 18 ppm
Number of pump strokes	4 (400 ml)	2 (200 ml)	1 (100 ml)
Correction factor	1/2	1	3
Sampling time	12 min	6 min	3 min

Detecting limit : 0.05 ppm (4 pump strokes)

Colour change : Yellow → Pink

Corrections for temperature & humidity : Unnecessary

Relative standard deviation : 10 % (for 0.25 to 1 ppm), 5 % (for 1 to 6 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 :  $2\text{HCN} + \text{HgCl}_2 \rightarrow 2\text{HCl} + \text{Hg}(\text{CN})_2$

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

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

Substance	Concentration	Interference	Changes colour by itself to
Acetone cyanohydrin		+	} Pink
Nitriles ( $\geq \text{C}_3$ )		+	
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 substances measurable with this detector tube

Substance	Correction	No. of pump strokes	Measuring range
Butyronitrile	Factor : 30	1	6 to 180 ppm
2-methyl-3-butenitrile	Factor : 2.0	2	0.4 to 12 ppm
2-Pentenenitrile	Factor : 1.2	2	0.24 to 7.2 ppm
3-Pentenenitrile	Factor : 2.0	2	0.4 to 12 ppm

## Calibration gas generation

Diffusion tube method

TLV-TWA : 2 ppm

Explosive range : 3 to 17 %