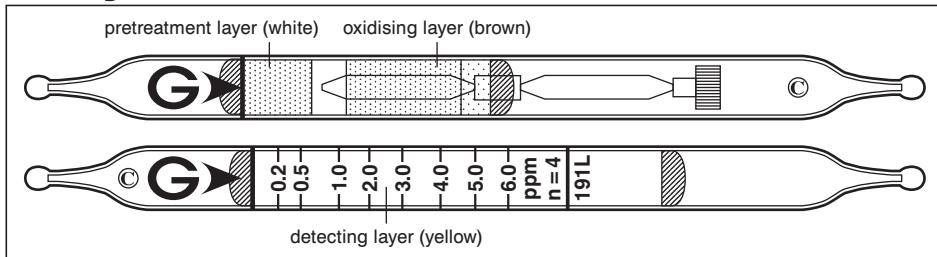


# Acrylonitrile CH<sub>2</sub>:CHCN

No.191L



## Performance

When used, these tubes are to be connected.

Measuring range	0.1 to 0.2 ppm	0.2 to 6.0 ppm	6.0 to 18.0 ppm
Number of pump strokes	4 (400 ml)	2 (200 ml)	1 (100 ml)
Correction factor	1/2	1	3
Sampling time	8 min	4 min	2 min

Detecting limit : 0.05 ppm (4 pump strokes)

Colour change : Yellow → Pink

Corrections for temperature & humidity : Unnecessary

Relative standard deviation : 10 % (for 0.2 to 2.0 ppm), 5 % (for 2.0 to 6.0 ppm)

Shelf life : 3 years

## Reaction principle

Pretreatment tube : CH<sub>2</sub>:CHCN + Cr<sup>6+</sup> + H<sub>2</sub>SO<sub>4</sub> → HCN

Detector tube : 2HCN + HgCl<sub>2</sub> → 2HCl

HCl + Base → Chloride

## Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Acetone cyanohydrin		+	Pink
Nitriles ( $\geq$ C <sub>3</sub> )		+	
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-butenenitrile	Factor : 2.0	2	0.4 to 12.0 ppm
2-Pentenenitrile	Factor : 1.2	2	0.24 to 7.2 ppm
3-Pentenenitrile	Factor : 2.0	2	0.4 to 12.0 ppm

## Calibration gas generation

Diffusion tube method