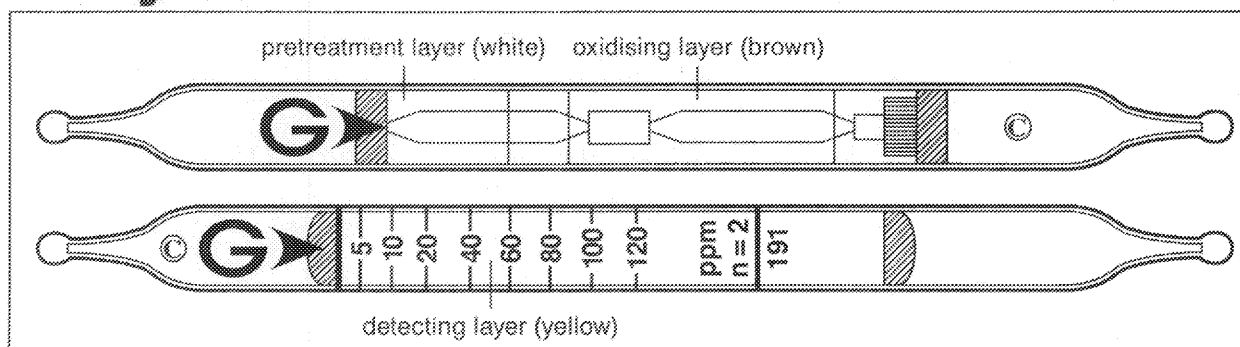


# Acrylonitrile CH<sub>2</sub>:CHCN

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	4 min	2 min	1 min

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

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

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

Substance	Concentration	Interference	Changes colour by itself to
Acetone cyanohydrin	$\geq 10$ ppm	+	} Red
Nitriles ( $\geq \text{C}_3$ )	$\geq 10$ 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