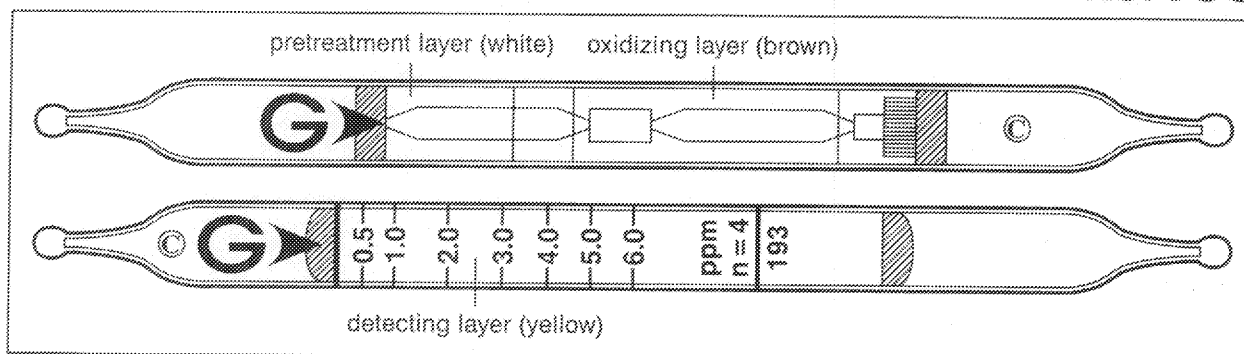


# 2-Pentenenitrile $\text{CH}_3\text{CH}_2\text{CH}:\text{CHCN}$

No. 193



## Performance

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

Measuring range	0.5 to 6 ppm	6 to 15 ppm
Number of pump strokes	4 (400 ml)	2 (200 ml)
Correction factor	1	2.5
Sampling time	12 min	6 min

Detecting limit : 0.1 ppm (4 pump strokes)

Colour change : Yellow → Red

Corrections for temperature & humidity : Temperature correction is necessary.

Relative standard deviation : 10 % (for 0.5 to 2 ppm), 5 % (for 2 to 6 ppm)

Shelf life : 3 years

## Reaction principle

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

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		+	} Red
Nitriles ( $\geq \text{C}_3$ )		+	
Alcohols, Esters, Ketones	$\geq 20$ ppm	-	} No
Aromatic hydrocarbons	$\geq 20$ ppm	-	

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

## Calibration gas generation

Diffusion tube method