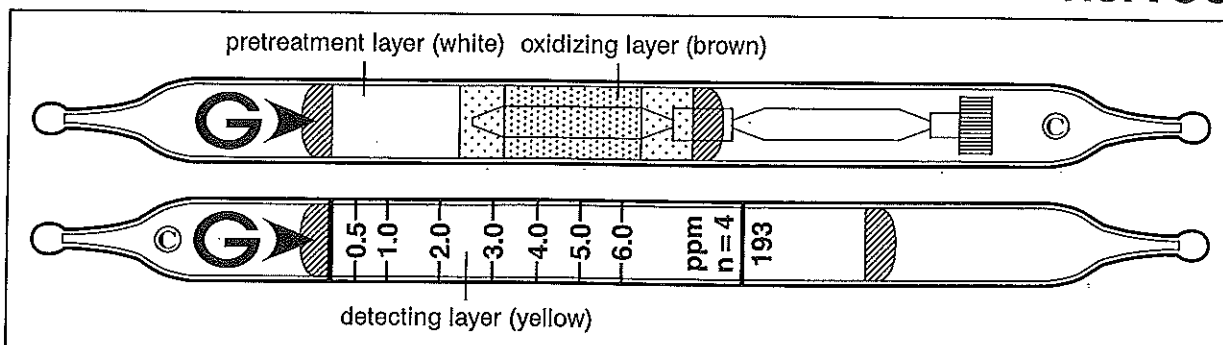


# 2-Pentenenitrile $\text{CH}_3\text{CH}_2\text{CH}:\text{CHCN}$

No. 193



## Performance

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

Measuring range	0.5 to 6.0 ppm	6.0 to 15.0 ppm
Number of pump strokes	4 (400 ml)	2 (200 ml)
Correction factor	1	2.5
Sampling time	8 min	4 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 :  $2\text{HCN} + \text{HgCl}_2 \rightarrow 2\text{HCl}$

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

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

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

Dehumidifying agent removes humidity and acid gases.

## Calibration gas generation

Diffusion tube method