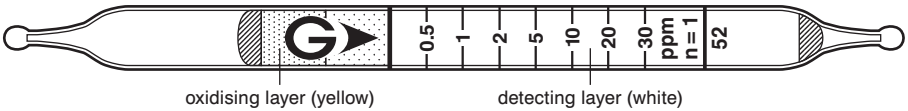
Pyrotube

Nitro Compounds

No.52



oxidising layer (yellow) detecting layer (white)

Performance

Measuring range	0.5 to 30 ppm
Number of pump strokes	1 (100 ml)
Correction factor	1
Sampling time	2 min

Detecting limit : 0.1 ppm (1 pump stroke)
Colour change : White → Yellowish orange
Corrections for temperature & humidity : Unnecessary
Shelf life : 3 years

Reaction principle

Pyrotec : Nitro compounds $\xrightarrow{\text{(Pyrolyzing)}}$ NOx
Pyrotube : $NOx + CrO_3 + H_2SO_4 \rightarrow NO_2$
NO_2 + o-Tolidine → Yellowish orange product

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Chlorine dioxide		+	Yellowish orange
Halogens		+	
Halogenated hydrocarbons		+	
Hydrogen chloride		+	
Sulphur dioxide	≧25 ppm	− (Bleaching)	No
Hydrogen sulphide	≧25 ppm	− (Bleaching)	No

Substances measurable with this Pyrotube

Substance	n	Correction factor	Measuring range
Acetonitrile	1	6.0	3 to 180 ppm
Nitroethane	1	8.0	4 to 240 ppm
Nitrogen dioxide	1	1.0	0.5 to 30 ppm
Nitromethane	1	10.0	5 to 300 ppm
1-Nitropropane	1	8.4	4.2 to 252 ppm
2-Nitropropane	1	7.4	3.7 to 222 ppm

Calibration gas generation

Permeation tube method