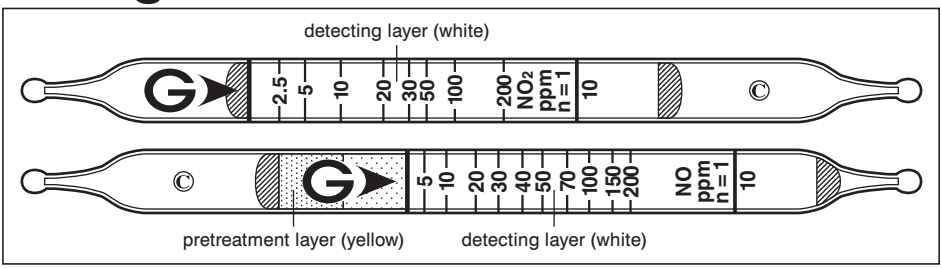
Nitrogen Oxides NO & NO_2 (separate quantification) No.10



Performance

Detector tube	NO tube		NO_2 tube
Measuring range	2.5 to 5 ppm	5 to 200 ppm	2.5 to 200 ppm
Number of pump strokes	2 (200 ml)	1 (100 ml)	1 (100 ml)
Correction factor	1/2	1	1
Sampling time	1.5 min	45 sec	45 sec

Detecting limit : NO tube; 1 ppm (2 pump strokes)
NO_2 tube; 0.5 ppm (1 pump stroke)

Colour change : NO/NO_2 tubes; White → Yellowish orange

Corrections for temperature & humidity : NO tube; Temperature correction is necessary.
NO_2 tube; Unnecessary

Relative standard deviation : NO tube; 10% (for 5 to 20 ppm), 5% (for 20 to 200 ppm)
NO_2 tube; 10% (for 2.5 to 20 ppm), 5% (for 20 to 200 ppm)

Shelf life : 3 years

Reaction principle

NO tube : $NO + Cr^{6+} + H_2SO_4 \rightarrow NO_2$ NO_2 + o-Tolidine → Yellowish orange product

NO_2 tube : NO_2 + o-Tolidine → Yellowish orange product

Possible coexisting substances and their interferences

For the NO_2 tube only. The NO tube will not be influenced by these substances.

Substance	Concentration	Interference	Changes colour by itself to
Chlorine dioxide	≧ 1/5	+ 20%	Yellowish orange
Halogen, Ozone	≧ 1/5		
Nitric oxide		No	Red (entrance of the detecting layer)
Hydrogen chloride		Unclear demarcation	No
Sulphur dioxide	≧ 50 ppm		

Calibration gas generation

NO tube : Permeation tube method, NO_2 tube : Permeation tube method

Special note

When used, connect the NO_2 tube and the NO tube (with their both ends broken off). This twin tube can measure NO and NO_2 concentrations simultaneously.