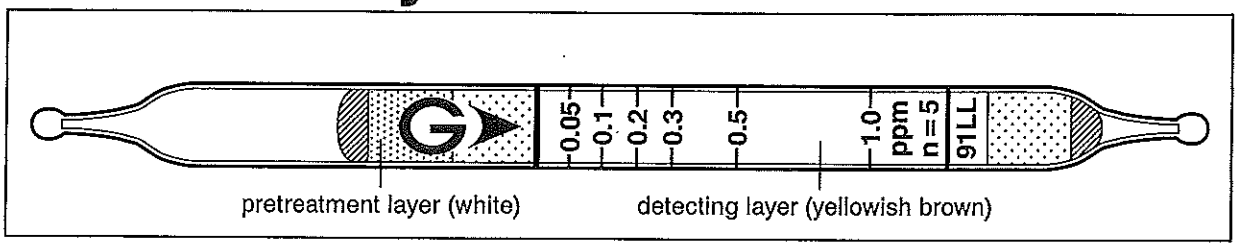
Formaldehyde HCHO No.91LL



Performance

Measuring range	0.05 to 1.0 ppm
Number of pump strokes	5 (500 ml)
Correction factor	1
Sampling time	7.5 min

Detecting limit : 0.03 ppm (5 pump strokes)
Colour change : Yellowish brown → Reddish brown
Corrections for temperature & humidity : Temperature correction is necessary.
Relative standard deviation : 10 %(for 0.05 to 0.3 ppm), 5 %(for 0.3 to 1.0 ppm)
Shelf life : 1 year (in the refrigerator)

Reaction principle

$3HCHO + (NH_2OH)_3H_3PO_4 \rightarrow H_3PO_4$
H_3PO_4 + Base → Phosphate

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

Substance	Concentration	Interference	Changes colour by itself to
Ammonia		–	Yellow(Unclear demarction)
Nitrogen dioxide		No	Pale pink
Aldehydes	≧ 1/3	+Unclear demarcation	Reddish brown (Unclear demarcation)
Ketones	≧ 1/1		
Toluene	≦ 10 ppm	No	No

Nitrogen dioxide is trapped in the pretreatment (white) layer. If the pretreatment layer is entirely consumed, the detecting layer turns its colour to pale pink at around zero point. But that does not affect the accuracy of the measurement.

Calibration gas generation

Diffusion tube method

TLV-STEL: C 0.3 ppm Explosive range : 7.0 to 73 %