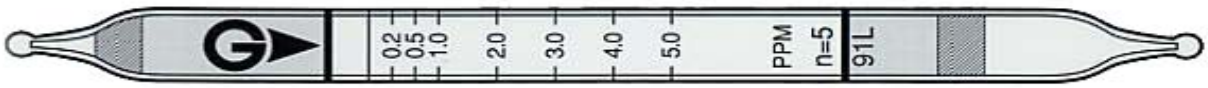
Formaldehyde HCHO NO.91L



Performance

Measuring Range	0.1 to 5 ppm	5 to 40 ppm
Number of Pump Strokes	5	1
Correction Factor	1	8
Sampling Time	1.5 minutes per pump stroke	
Detecting Limit	0.05 ppm (n=5)	
Colour Change	Yellow → Reddish Brown	
Reaction Principle	Formaldehyde reacts with hydroxylamine phosphate to liberate phosphorous acid, which discolours pH indicator to reddish brown $3HCHO + (NH_2OH)_3H_3PO_4 \rightarrow H_3PO_4$ H_3PO_4 + Base → Phosphate	
Coefficient of Variation	10% (for 0.1 to 0.5 ppm), 5% (for 0.5 to 5 ppm)	
Shelf Life	3 Years	
Corrections for temperature & humidity	Temperature correction is necessary	
Store the tubes in the refrigerator to keep at 10°C (50°F) or below.		

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Change colour by itself
Aldehydes	-	Plus error	Produce reddish brown stain
Ketones	-	Plus error	Produce reddish brown stain
Acid Gases	-	Plus error	Produce red stain
Organic acids	-	No effect	No stain produced

Other substance measurable with this detector tube

Substance	Correction Factor	No. of Pump strokes	Measuring range
Diisobutyl ketone	5.8	4	0.58 to 29 ppm
Methaldehyde	0.65	3	0.065 to 3.25ppm
Propionaldehyde	7.6	1	0.76 to 38 ppm

91L Tube Reading (n=1)	0.2	0.5	1	2	3	4	5
Benzaldehyde (ppm)	2	4	9	22	40	63	92

91L Tube Reading (n=1/2)	0.2	0.5	1	2	3	4	5
Cyclohexanone (ppm)	10	30	60	130	220	330	470

Calibration gas generation Diffusion tube method

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