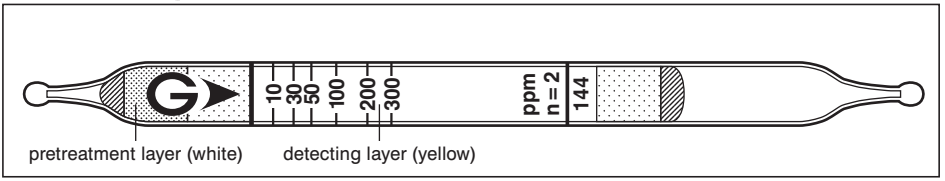
Isobutyl Acetate $CH_3CO_2CH_2CH(CH_3)_2$ or i-$CH_3CO_2C_4H_9$ No.144



Performance

Measuring range	10 to 300 ppm
Number of pump strokes	2 (200 ml)
Correction factor	1
Sampling time	4 min

Detecting limit : 2 ppm (2 pump strokes)
Colour change : Yellow → Blackish brown (few minutes later) → Pale blue
Corrections for temperature & humidity : Temperature correction is necessary.
Relative standard deviation : 15 %(for 10 to 100 ppm), 10 %(100 to 300 ppm)
Shelf life : 2 years

Reaction principle

$CH_3CO_2CH_2CH(CH_3)_2 + Cr^{6+} + H_2SO_4 \rightarrow Cr^{3+}$

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Alcohols		+	Dark brown (few minutes later) → Pale blue
Esters		+	
Ketones		+	

Water vapour is trapped in the pretreatment (white) layer.

Calibration gas generation

Diffusion tube method