tert-Butyl Mercaptan (CH3)3CSH

No.75

Performance

Measuring range	2.5 to 30 mg/m ³	30 to 60 mg/m ³	60 to 150 mg/m ³
Number of pump strokes	2 (200 ml)	1(100 ml)	1/2(50 ml)
Correction factor	1	2	5
Sampling time	3 min	1.5 min	45 sec

Detecting limit: 0.5 mg/m³ (2 pump strokes)

Colour change: Yellow → Red

Corrections for temperature & humidity: Temperature correction is necessary.

Relative standard deviation: 10 % (for 2.5 to 10 mg/m³), 5 % (for 10 to 30 mg/m³)

Shelf life: 2 years

Reaction principle

(CH₃)₃CSH + HgCl₂ → (CH₃)₃CS·HgCl + HCl

HCI + Base → Chloride

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Hydrogen sulphide		+)
Other mercaptans		+	Red
Phosphine		+	J

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

Calibration gas generation

Diffusion tube method

Special note

tert-Butyl mercaptan is used as an odorant in fuel gases for warning of their leakage.