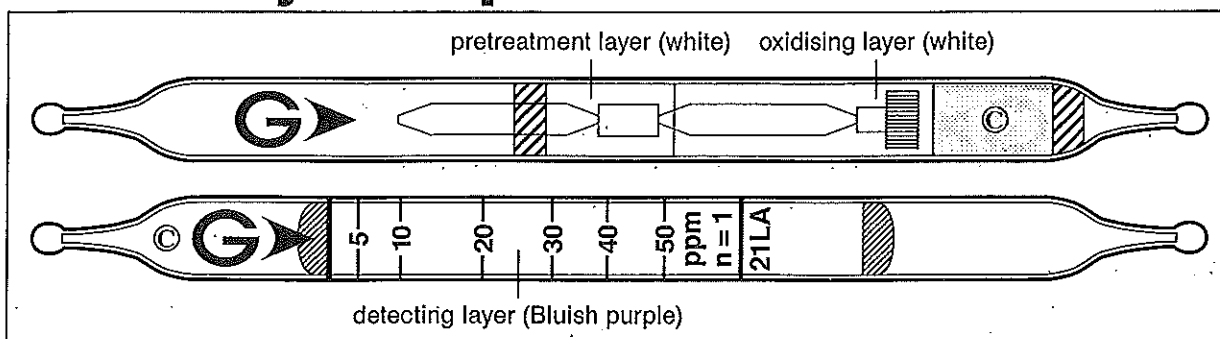


Carbonyl Sulphide COS

No.21LA



Performance

When used, these tubes are to be connected. See page 2-3.

Measuring range	2 to 5 ppm.	5 to 50 ppm	50 to 125 ppm
Number of pump strokes	2 (200 ml)	1 (100 ml)	1/2 (50 ml)
Correction factor	0.4	1	2.5
Sampling time	6 min	3 min	1.5 min

Detecting limit : 0.8 ppm (2 pump strokes)

Colour change : Bluish purple → White

Corrections for temperature & humidity : Temperature correction is necessary.

Relative standard deviation : 10 % (for 5 to 20 ppm), 5 % (for 20 to 50 ppm)

Shelf life : 2 years (in the refrigerator)

Reaction principle

Pretreatment tube : $\text{COS} + \text{I}_2\text{O}_5 + \text{H}_2\text{SO}_4 \rightarrow \text{SO}_2 + \text{CO}_2$

Detector tube : $\text{SO}_2 + \text{I}_2 + 2\text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_4 + 2\text{HI}$

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

Substance	Concentration	Interference	Changes colour by itself to
Carbon disulphide		+	} White
Sulphur dioxide		+	
Carbon monoxide	≥ 500 ppm	+	Black
Nitrogen dioxide	≥ 2 ppm	+	Brown
Butane, Propane	≤ 10 %	No	Black at the entrance of the detecting layer
Carbon dioxide		No	No
Hydrogen sulphide	≥ 1000 ppm	+	White

Calibration gas generation

High pressure gas cylinder method