

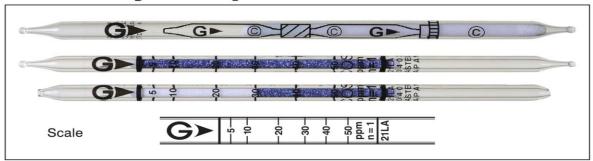


Carbonyl Sulphide COS

Part No.:21LA

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

Operating conditions : Temperature 0 to 40 $^{\circ}$ C (32 to 104 $^{\circ}$ F) correction used

Relative humidity 0 to 90 % correction not used

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

Tube quantity and number of tests per box: 10 tubes for 5 tests

Shelf life: 36 months (in the refrigerator)

Reaction principle

 $COS + I_2O_5 + H_2SO_4 \rightarrow SO_2 + CO_2$ $SO_2 + I_2 + H_2O \rightarrow H_2SO_4 + 2HI$

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Carbon disulphide Sulphur dioxide		++	} White
Carbon monoxide	≥ 500 ppm	Black	Black at 500ppm
Nitrogen dioxide	≥ 2 ppm	+	Brown at 2ppm
Butane, Propane	≦ 10 %	No	Black at the entrance of the detecting layer
Carbon dioxide		No	No
Hydrogen sulphide	≦ 1000 ppm	No effect at 1 ppm stroke	*

^{If the primary tube is totally discolored, the analyser tube will be discolored white due to} the effect of hydrogen sulphide.

Calibration gas generation

High pressure gas cylinder method