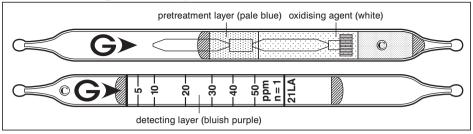
# Carbonyl Sulphide cos

# No.21LA



#### Performance

When used, these tubes are to be connected.

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 10 ppm), 5 % (for 10 to 50 ppm)

Shelf life: 2 years (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		*
		1 ppm stroke	

<sup>\*</sup>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