

KITAGAWA

ETHYL ETHER LENGTH-OF-STAIN DETECTOR TUBES
(Type SA)
(Direct Reading Type)

PERFORMANCE :

Measuring Range : 0.04 - 1.4 %
Sampling Time : 1.5 minutes (1 pump stroke)
Color Change : Orange - Dark Green
Sensing Limit* : 10 ppm

*The minimum detectable concentration although not precise.

**FLOW CONTROL ORIFICE IN THE PUMP SHOULD BE REMOVED BEFORE SAMPLING.

SAMPLING AND MEASUREMENT:

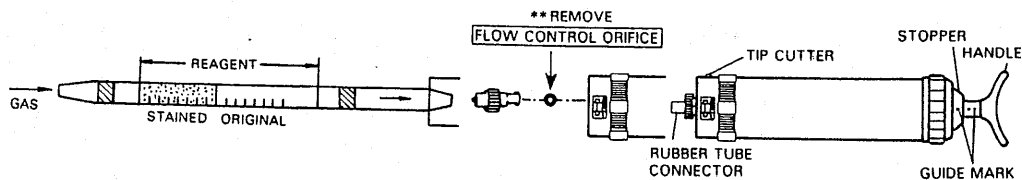


Fig. 1

1. Break tips of a fresh detector tube by bending each tube end in the tube tip cutter and then insert the tube end, of which direction is marked with broad arrow securely into pump inlet, as shown in Fig.1.
2. Use of Model 400 aspirating pump;
Align the guide marks (red points) on shaft and back plate of the pump. And pull the handle at a full stroke and lock it with 1/4 turn (90°). Wait 1.5 minutes as it is.
Use of Model 400A or APS aspirating pump;
Align the guide marks (red points) on shaft and stopper of the pump. And pull the handle at a full stroke. Wait 1.5 minutes as it is.
3. Remove the detector tube from the pump inlet on the completion of the sampling. The reading can be obtained directly from the scale printed on the detector tube.

SPECIAL NOTE:

When the top of the discolored layer is colored obliquely, read the concentration at the center between the longest and the shortest points of the discolored layer. The total stain length should be read regardless of color variations.

TEMPERATURE CORRECTION:

The concentration scale is calibrated on the tube temperature of 20°C (68°F), therefore when testing at the other temperatures, readings from the concentration scale should be corrected with the temperature correction table.

Scale Readings (%)	True Concentration (ppm)				
	0°C (32°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
1.4	1.8	1.6	1.4	1.3	1.1
1.2	1.5	1.4	1.2	1.1	0.9
1.0	1.2	1.1	1.0	0.9	0.8
0.8	0.9	0.9	0.8	0.7	0.6
0.6	0.6	0.6	0.6	0.6	0.5
0.5	0.5	0.5	0.5	0.5	0.4
0.4	0.4	0.4	0.4	0.4	0.3
0.3	0.3	0.3	0.3	0.3	0.3

INTERFERENCES:

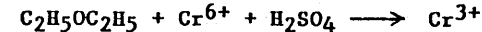
Coexistence of more than 3 % of Acetylene or 0.2 % of Propane change the whole reagent to Brown. Coexistence of more than 50 ppm of the other organic gases or vapors except Halogenated hydrocarbons produce similar stains and give higher readings.

HAZARDOUS AND DANGEROUS PROPERTIES OF ETHYL ETHER:

T.L.V.*** : 400 ppm
Explosive range in air : 1.9 - 48.4 %

***Threshold Limit Value established by the American Conference Governmental Industrial Hygienists, 1984.

CHEMICAL REACTION IN THE DETECTOR TUBE:



BEFORE TESTING, THE PUMP SHOULD BE CHECKED FOR PROPER PERFORMANCE.
LEAKAGE OF AIR WILL AFFECT ACCURATE READINGS.