

KITAGAWA

PROPYLENE OXIDE LENGTH-OF-STAIN DETECTOR TUBES
(Type SA)
(Direct Reading Type)

PERFORMANCE :

Measuring Range :	0.05 - 3.0 %	1.0 - 5.0 %
Sampling Time :	1.5 min. (1 pump stroke)	45 or 90 sec. (1/2 pump stroke)
Color Change :	Orange - Dark Brown	
Sensing Limit* :	20 ppm	

*The minimum detectable concentration although not precise.

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

SAMPLING AND MEASUREMENT:

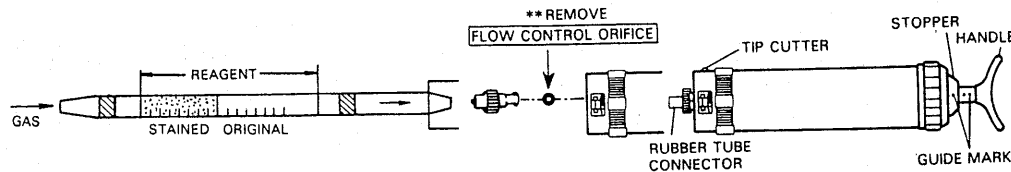
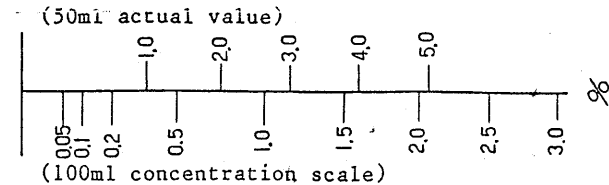


Fig. 1

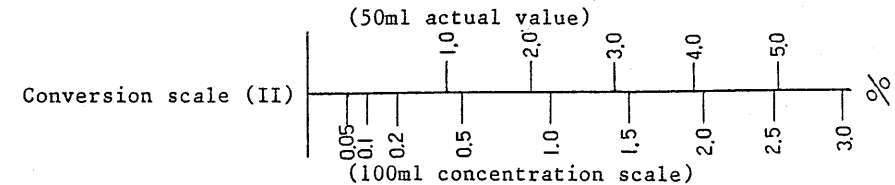
- Break tips of a fresh detector tube by bending each tube end in the tube tip cutter and then insert the tube end, of which direction is marked with broad arrow securely into pump inlet, as shown in Fig.1.
- Use of Model 400 aspirating pump;
Align the guide marks (red points) on shaft and back plate 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 min. as it is.
- 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.
- If the discoloration is over the scale, change tube and pull 1/2 stroke.
Use of Model 400 aspirating pump;
1) Without connecting the tube, pull the handle 1/2 stroke (to 50ml line).
2) Insert the new tube to the pump inlet and pull the handle fully (to 100ml). Lock it with 1/4 turn (90°) and leave it for 90 seconds as it is.
3) Remove the detector tube from the pump and read the concentration.
4) Convert the reading value corrected by the temperature correction table, using the following conversion scale (I).

Conversion scale (I)



Use of Model 400A or APS aspirating pump;

- 1) Insert the new tube to the pump inlet. Pull the handle 1/2 stroke (to 50ml line), and it will be automatically locked. Leave it for 45 sec. as it is.
- 2) Remove the detector tube from the pump and read the concentration.
- 3) Convert the reading value using the following conversion scale (II).



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, HUMIDITY CORRECTION:

No temperature correction is necessary at the temperature of 0°C (32°F) to 40°C (104°F). Relative humidity, no need for correction.

INTERFERENCES:

Alcohols, Esters, Ketones or Aromatic hydrocarbons produce similar stains and gives higher readings. Halogenated hydrocarbons change the whole reagent to Pale Brown and coexistence of more than 0.5 % of them give higher readings.

HAZARDOUS AND DANGEROUS PROPERTIES OF PROPYLENE OXIDE:

T.L.V.*** : 20 ppm
Explosive range in air : 2.0 - 30.5 %

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

CHEMICALS REACTION IN THE DETECTOR TUBE:

