

SPECIAL NOTE: I. The scale is calibrated at 20 °C (68°F), 50 %R.H. and 1013hPa. Readings obtained in other circumstances should be corrected (**REFER TO ITEM 3. CORRECTION FOR AMBIENT CONDITIONS**).

II. When the maximum point of the stained layer is unclear or obliquely, read the scale at the centre between the longest and shortest points.

3. CORRECTION FOR AMBIENT CONDITIONS:

① Temperature; Correct the tube reading by following temperature correction table.

Temperature Correction Table					
Tube Readings (%)	Corrected Concentration (%)				
	0 °C (32°F)	10 °C (50°F)	20 °C (68°F)	30 °C (86°F)	40 °C (104°F)
10.0	4.8	8.0	10.0	12.5	15.0
8.0	4.1	6.4	8.0	10.0	12.0
6.0	3.3	4.8	6.0	7.5	9.0
4.0	2.4	3.2	4.0	5.0	6.0
2.0	1.4	1.7	2.0	2.5	3.0
1.0	0.76	0.85	1.0	1.25	1.45
0.5	0.4	0.43	0.5	0.63	0.7
0.3	0.23	0.24	0.3	0.38	0.45
0.1	0.07	0.08	0.1	0.13	0.15

② Humidity; No corrections is necessary.

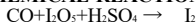
③ Atmospheric Pressure;

$$\text{True concentration} = \frac{\text{Temperature corrected} \times \text{concentration}}{\text{Atmospheric pressure (in hPa)}} \times 1013$$

4. INTERFERENCES:

Acetylene produces a similar stain and coexistence of more than 0.1% respectively with Carbon monoxide will give higher readings. Ethylene also produces a similar stain and coexistence of more than 1% will give higher readings. Isobutane produces a speckled stain and coexistence of more than 0.5% will give higher readings. Propane also produces a speckled stain. Hexane produces a similar stain and coexistence of more than 0.4% produces an unclear stain and will give higher reading.

5. CHEMICAL REACTION IN THE DETECTOR TUBE:



6. DISPOSAL OF TUBE:

USED TUBES SHOULD BE DISPOSED CAREFULLY ACCORDING TO RELEVANT REGULATIONS, IF ANY.

7. HAZARDOUS AND DANGEROUS PROPERTIES OF CARBON MONOXIDE:

TLV-TWA. ◆ : 25 ppm

Explosive range in air : 12.5 - 74 %

◆ Threshold Limit Value established by the American Conference of Governmental Industrial Hygienists, 2022.

8. INSPECTION OF ASPIRATING PUMP:

Checking for leaks;

- ① Insert sealed, unbroken detector tube into the pump.
- ② Align the guide marks on the shaft and stopper of the pump.
- ③ Pull the handle to full stroke and wait for 1 minute.
- ④ Unlock the handle and allow it to return slowly into the pump by holding the cylinder and handle securely.

⚠ CAUTION HANDLE WILL TEND TO SNAP BACK INTO THE PUMP QUICKLY.

⑤ If the handle returns completely to the original position, the performance is satisfactory.

Otherwise, refer to maintenance procedure in the instruction manual to correct the leakage.

9. USER RESPONSIBILITY:

It is the sole responsibility of the user of this equipment to ensure that the equipment is operated, maintained, and repaired in strict accordance with these instructions and the instructions provided with each Model AP-20, AP-20S, AP-1 or AP-1S aspirating pump, and that detector tubes are not used which are either beyond their expiration date or have a colour change different to that stated in the Performance specifications.

The Manufacturer and Manufacturer's Distributors shall not be otherwise liable for any incorrect measurement or any damages, whether damages result from negligence or otherwise.