ACETYLENE



1. PERFORMANCE

1) Measuring range : 50-1000 ppmNumber of pump strokes $: 1(100\text{m}\ell)$

2) Sampling time : 3 minutes/1 pump stroke

3) Detectable limit : 10 ppm4) Shelf life : 3 years5) Operating temperature $: 0 \sim 40 \,^{\circ}\text{C}$

6) Reading : Direct reading from the scale calibrated by 1 pump stroke

7) Colour change : Pale yellow→ Brownish blue

2. RELATIVE STANDARD DEVIATION

RSD-low: 10% RSD-mid.: 5% RSD-high: 5%

3. CHEMICAL REACTION

Molybadate is reduced and molybdeum blue is produced. $HC \equiv CH + PdSO_4 + (NH_4) 2MoO_4 \rightarrow Mo_3O_8$

4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Carbon monoxide	Whole layer is discoloured to Green or Blue.	50	Whole layer is discoloured to Green or Blue and higher readings are given.
Hydrogen (over 40 ℃)	"	10%	Whole layer is discoloured to Green and higher readings are given.
Unsaturated hydrocarbons such as Ethylene, Propylene, Butylene, etc.	Similar stain is produced.	10	Higher readings are given.
Saturated hydrocarbons such as Propane, Butane, etc. (more than C ₃)	"	10	"
Butadiene	Original colour is faded to white.	25	Original colour is faded to White and lower readings are given.
Hydrogen sulphide	Whole layer is discoloured to Black.	10	Black stain is produced.
Ammonia	Original colour is faded to White.		Original colour is faded to White and lower readings are given.
Hydrogen cyanide	"		Blue stain is produced and higher reading are given.
Chlorine	Yellowish orange or Yellowish brown stain is produced.		Higher readings are given.
Nitrogen dioxide	"		"
Carbon disulphide	"		"