# **PENTYL ACETATE**



## 1. PERFORMANCE

1) Measuring range 10-200 ppmNumber of pump strokes  $3(300\text{m}\ell)$ 

2) Sampling time : 4.5 minutes/3 pump strokes

3) Detectable limit  $\therefore$  4 ppm 4) Shelf life  $\therefore$  2 years 5) Operating temperature  $\therefore$  10  $\sim$  40  $^{\circ}$ C

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE") 7) Reading : Direct reading from the scale calibrated by 3 pump strokes

8) Colour change : Pale yellow→Pale blue (more than 20 ppm)

→ Dark brown (20 ppm or less)

## 2. RELATIVE STANDARD DEVIATION

RSD-low: 15% RSD-mid.: 10% RSD-high: 10%

## 3. CHEMICAL REACTION

Chromium oxide is reduced.

 $CH_3CO_2(CH_2)_4CH_3 + Cr^{6+} + H_2SO_4 \rightarrow Cr^{3+}$ 

## 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

## 5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	Coexistence	
Alcohols	Similar or Brown stain is produced.	Higher readings are given.	
Esters	"	"	
Ketones	"	"	
Aromatic hydrocarbons	The accuracy of readings is not affected.	Whole reagent is changed to Brown, but if the maximum end point of the stain is discernable, the accuracy of readings is not affected.	
Aliphatic hydrocarbons (more than C <sub>3</sub> )	"	"	
Halogenated hydrocarbons		"	

## TEMPERATURE CORRECTION TABLE

Tube	Corrected Concentration (ppm)				
Readings (ppm)	10 °C (50 °F)	20 °C (68 °F)	30°C (86°F)	40 °C (104 °F)	
200	240	200	160	120	
150	180	150	130	100	
100	120	100	80	70	
50	60	50	40	30	
30	36	30	24	18	
10	10	10	8	6	