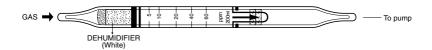
# **METHYL ACRYLATE**



#### 1. PERFORMANCE

1) Measuring range : 5-60 ppmNumber of pump strokes  $2(200 \text{m} \ell)$ 

2) Sampling time : 3 minutes/2 pump strokes

3) Detectable limit 0.5 ppm4) Shelf life 2 years5) Operating temperature  $0 \sim 40 \text{ °C}$ 

6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE") 7) Reading : Direct reading from the scale calibrated by 2 pump strokes

8) Colour change : Yellow→Pale blue

## 2. RELATIVE STANDARD DEVIATION

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

#### 3. CHEMICAL REACTION

Chromium oxide is reduced.

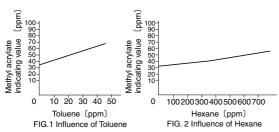
 $CH_2 = CHCO_2CH_3 + Cr^{6+} + H_2SO_4 \rightarrow Cr^{3+}$ 

## 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

## 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance   | Interference                            | Coexistence                |  |
|---|---|----------------------------|--|
| Alcohols  | Similar stain is produced.              | Higher readings are given. |  |
| Paraffin hydrocarbons (more than C <sub>3</sub> ) FIG.2 | Whole reagent is changed to dark Brown. | "                          |  |
| Halogenated hydrocarbons                                | "                                       | "                          |  |
| Esters  | "                                       | "                          |  |
| Aromatic hydrocarbons FIG.1                             | "                                       | "                          |  |



#### TEMPERATURE CORRECTION TABLE

|  | Scale<br>Readings<br>(ppm) | True Concentration (ppm) |               |                |                |                  |  |
|--|----------------------------|--------------------------|---------------|----------------|----------------|------------------|--|
|  |                            | 0 °C<br>(32* F)          | 10℃<br>(50°F) | 20°C<br>(68°F) | 30°C<br>(86°F) | 40°C<br>(104° F) |  |
|  | 60                         | 88                       | 70            | 60             | 54             | 48               |  |
|  | 40                         | 54                       | 46            | 40             | 36             | 32               |  |
|  | 20                         | 28                       | 24            | 20             | 18             | 16               |  |
|  | 10                         | 14                       | 12            | 10             | 9              | 8                |  |
|  | 5                          | 7                        | 6             | 5              | 4              | 3                |  |