

## 1. PERFORMANCE

- 1) Measuring range : 1-50 ppm
- Number of pump strokes : 1 (100mℓ)
- 2) Sampling time : 1.5 minutes/1 pump stroke
- 3) Detectable limit : 0.2 ppm
- 4) Shelf life : 1 year (Necessary to store in a refrigerated place ; 0 ~ 10 °C)
- 5) Operating temperature : 0 ~ 40 °C
- 6) Temperature compensation : Necessary (See "TEMPERATURE CORRECTION TABLE")
- 7) Reading : Direct reading from the scale calibrated by 1 pump stroke
- 8) Colour change : White → Yellow

## 2. RELATIVE STANDARD DEVIATION

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

## 3. CHEMICAL REACTION

Bromine is produced by an Oxidizer. By reacting between this Bromine and *o*-Toluidine, Orthoquinone is produced  
 $\text{BrCH}_2\text{CH}_2\text{Br} + \text{I}_2\text{O}_4 + \text{CrO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{Br}_2$

## 4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

## 5. INTERFERENCE AND CROSS SENSITIVITY

| Substance                | Interference                              | ppm | Coexistence                |
|--------------------------|---|-----|----------------------------|
| Halogens                 | Similar stain is produced.                |     | Higher readings are given. |
| Halogenated hydrocarbons | ∕   |     | ∕                          |
| Hexane<br>FIG.1          | The accuracy of readings is not affected. | 200 | Lower readings are given.  |

## TEMPERATURE CORRECTION TABLE

| Scale Readings (ppm) | True Concentration (ppm) |               |               |               |               |               |
|----------------------|--------------------------|---------------|---------------|---------------|---------------|---------------|
|                      | 10 °C (50 °F)            | 15 °C (59 °F) | 20 °C (68 °F) | 25 °C (77 °F) | 30 °C (80 °F) | 35 °C (95 °F) |
| 50                   | —                        | —             | 82            | 50            | 42            | 39            |
| 40                   | —                        | 80            | 58            | 40            | 35            | 33            |
| 30                   | 98                       | 56            | 40            | 30            | 27            | 26            |
| 20                   | 50                       | 40            | 30            | 20            | 18            | 18            |
| 10                   | 16                       | 14            | 12            | 10            | 10            | 10            |
| 5                    | 7                        | 7             | 6             | 5             | 5             | 5             |
| 1                    | 1                        | 1             | 1             | 1             | 1             | 1             |

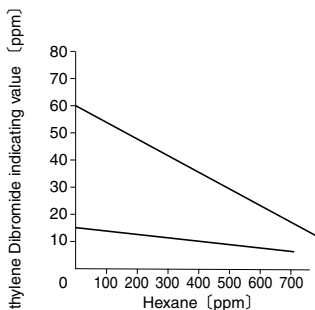


FIG.1 Influence of Hexane