# **TETRAHYDROFURAN**



## 1. PERFORMANCE

1) Measuring range : 2.0-5.0 % 0.2-3.0% 1/2(50ml) 1(100ml) Number of pump strokes 2) Sampling time : 1.5 minutes/1 pump stroke

3) Detectable limit 20 ppm 4) Shelf life 3 years 5) Operating temperature 0 ~ 40 ℃

6) Temperature compensation Necessary (See "TEMPERATURE CORRECTION TABLE")

7) Reading Graduations printed on the tube are calibrated by Acetone at 1 pump stroke and

Tetrahydrofuran is determined by using a conversion chart.

8) Colour change : Orange→Dark brown

## 2. RELATIVE STANDARD DEVIATION

RSD-low: 15 % RSD-mid.: 10 % RSD-high: 5 %

#### 3. CHEMICAL REACTION

Potassium dichromate is reduced.

$$CH_2$$
- $CH_2$  O +  $Cr^{6+}$  +  $H_2SO_4$   $\rightarrow$   $Cr^{3+}$ 

# 4. CALIBRATION OF THE TUBE

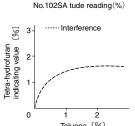
GAS CHROMATOGRAPHY

## 5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence	
Alcohols	Similar stain is produced.		Higher readings are given.	
Atromatic hydrocarbons FIG.1	"		"	
Ketones	"		"	
Esters FIG.2	! "		"	
Halogenated hydrocarbons	Whole reagent is changed to Pale brown.	0.5%	"	

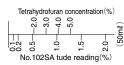
#### (NOTE)

In case of 1/2 pump stroke, following conversion scale is available for actual concentration.



Tetrahydrofuran concentration(%)

Toluene (%) FIG.1 Influence of Toluene



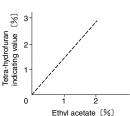


FIG.2 Influence of Ethyl acetate

TEMPERATURE CORRECTION TABLE

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Readings (%)	0°C (32°F)	10 °C (50 °F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
3.0	_	3.2	3.0	2.8	2.7
2.5	3.0	2.7	2.5	2.4	2.2
2.0	2.4	2.1	2.0	1.9	1.8
1.5	1.8	1.6	1.5	1.4	1.3
1.0	1.1	1.1	1.0	1.0	0.9
0.5	0.6	0.5	0.5	0.5	0.5