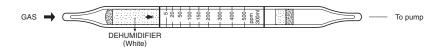
1-BUTANOL



1. PERFORMANCE

1) Measuring range 5-100 ppmNumber of pump strokes $3(300 \text{m} \ell)$

2) Sampling time : 4.5 minutes/3 pump strokes

3) Detectable limit ∴ 2 ppm 4) Shelf life ∴ 2 years 5) Operating temperature ∴ 0 ~ 40 °C

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

7) Reading : Graduations printed on the tube are calibrated by Ethyl cellosolve at 3 pump strokes

and 1-Butanol concentration is determined by using a conversion chart.

8) Colour change : Yellow→Pale blue

2. RELATIVE STANDARD DEVIATION

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

3. CHEMICAL REACTION

Chromium oxide is reduced.

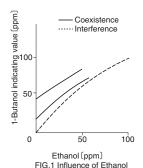
 $CH_3CH_2CH_2CH_2OH + Cr^{6+} + H_2SO_4 \rightarrow Cr^{3+}$

4. CALIBRATION OF THE TUBE

GAS CHROMATOGRAPHY

5. INTERFERENCE AND CROSS SENSITIVITY

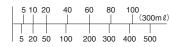
Substance	ppm Interference		Coexistence		
Alcohols FIG.1		Similar stain is produced.	Higher readings are given.		
Toluene	200	Whole reagent is changed to Pale blue.	"		
Hexane	1,000	The accuracy of readings is not affected.	The accuracy of readings is not affected.		
Trichloroethylene	1,000	"	"		
Ethyl acetate FIG.2	1,000	"	"		



(mdd) anle obtained indicating dalue (panel) 50 0 500 1000

Ethyl acetate (ppm) FIG.2 Influence of Ethyl acetate

1-Butanol (ppm)



No.190U Tube reading (ppm)

TEMPERATURE CORRECTION TABLE

Conversion	Corrected Concentration (ppm)					
Value (ppm)	0°C (32°F)	10 °C (50 °F)	20 °C (68 °F)	30 °C (86 °F)	40 °C (104 °F)	
100	_	_	100	85	77	
80	_	_	80	70	63	
60	_	80	60	53	50	
40	75	50	40	35	33	
20	30	23	20	18	16	
10	13	-11	10	9	8	
5	5	5	5	5	5	