PHENOL



1. PERFORMANCE

1) Measuring range 0.5-25.0 ppmNumber of pump strokes $2(200\text{m}\ell)$

2) Sampling time : 3 minutes/2 pump strokes

3) Detectable limit 0.3 ppm4) Shelf life 0.3 ppm5) Operating temperature 0.3 ppm0.3 ppm

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

8) Colour change : Pale yellow→Pale light brown (Pale brown)

2. RELATIVE STANDARD DEVIATION

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

3. CHEMICAL REACTION

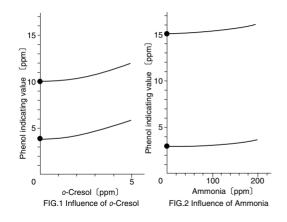
Phenol is oxidized and the Polymer is produced. $C_6H_5OH + Ce^{4+} \rightarrow C_6H_5O \cdot \rightarrow (C_6H_5O)_n$

4. CALIBRATION OF THE TUBE

ABSORPTIOMETRIC METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance		Interference	ppm	Coexistence	
Other phenols	FIG.1	Similar stain is produced.	2.5	Higher readings are given.	
Ammonia	FIG.2	White stain is produced.	200	Discolouration of gas inlet side is faded and higher readings are given.	
Aliphatic amines		"	50	"	
Aromatic amines		Blue stain is produced.	50	Two layers discolouration of Pale brown and Blue are produced and higher read ings are given.	



TEMPERATURE CORRECTION TABLE

Scale	True Concentration (ppm)						
Readings (ppm)	0°C (32°F)	10 ℃ (50* F)	20°C (68°F)	30°C (86°F)	40 ℃ (104 ° F)		
25.0	31.2	27.8	25.0	21.8	18.8		
20.0	24.5	22.3	20.0	17.5	15.0		
15.0	18.4	16.7	15.0	13.1	11.3		
10.0	12.3	11.1	10.0	8.8	7.5		
5.0	6.1	5.6	5.0	4.4	3.8		
3.0	3.7	3.3	3.0	2.6	2.3		
1.0	1.2	1.1	1.0	0.9	0.8		
0.5	0.5	0.5	0.5	0.5	0.5		
	Readings (ppm) 25.0 20.0 15.0 10.0 5.0 3.0 1.0	Readings (ppm) 0 °C (32° F) 25.0 31.2 20.0 24.5 15.0 18.4 10.0 12.3 5.0 6.1 3.0 3.7 1.0 1.2	Readings (ppm) 0 °C (30° F) 10 °C (50° F) 25.0 31.2 27.8 20.0 24.5 22.3 15.0 18.4 16.7 10.0 12.3 11.1 5.0 6.1 5.6 3.0 3.7 3.3 1.0 1.2 1.1	$\begin{array}{llllllllllllllllllllllllllllllllllll$	Readings (ppm) 0 °C (22° P) 10 °C (26° P) 20 °C (30° C) 30° C (30° C) 25.0 31.2 27.8 25.0 21.8 25.0 24.5 22.3 20.0 17.5 15.0 18.4 16.7 15.0 13.1 10.0 12.3 11.1 10.0 8.8 5.0 6.1 5.6 5.0 4.4 3.0 3.7 3.3 3.0 2.6 1.0 1.2 1.1 1.0 0.9		