

# INSTRUCTION MANUAL WATER CONTENT TUBE IN SOLVENT H<sub>2</sub>O (Type S)

No.77S

DO NOT DISCARD THIS INSTRUCTION MANUAL UNTIL ALL TUBES IN THIS BOX ARE USED UP.

# 1. PERFORMANCE:

Sampling level and Measuring range:

(1) In case of sampling position (C); 10 - 160 mg/L (\*)

② In case of sampling position (D); 50 - 400 mg/L

(\*) Graduations on the detector tube are based on sampling position (C).

Conversion chart for (D) are shown in the following Fig.2.

| Sampling Amount       | : Approx. 1 mL                                       |
|-----------------------|--|
| Sampling Time         | : Approx. 10 seconds                                 |
| Colour Change         | : Yellow → Blueish purple                            |
| Detectable Limit      | : 5 mg/L   |
| Operating Temperature | : 10 - 30 °C (50-86°F) (No correction is necessary.) |

### **▲**CAUTION

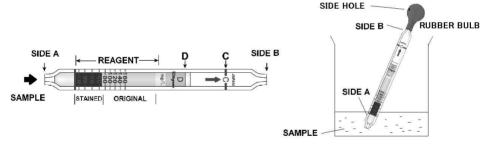
- 1. THE DETECTOR TUBE CONTAINS CHEMICAL REAGENTS.
- 2. DO NOT TOUCH THESE REAGENTS DIRECTLY ONCE TUBES WERE BROKEN.

3. KEEP THE TUBES OUT OF THE REACH OF CHILDREN.

#### NOTICE

- 1. DO NOT USE THIS TUBE OUTSIDE THE STATED OPERATING TEMPERATURE RANGE.
- 2. STORE TUBES IN A COOL AND DARK PLACE (0-25 °C/32-77°F), AND USE BEFORE EXPIRATION DATE PRINTED ON THE TOP OF THE BOX.
- 3. PRIOR TO USE, READ CAREFULLY ITEM 8. USER RESPONSIBILITY.
- 4. READ THE CONCENTRATION IMMEDIATELY AFTER MEASUREMENT.

### 2. SAMPLING AND MEASUREMENT:

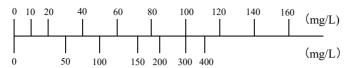


- (1) Flaw both ends of the detector tube with attached ampule cutter.
- Break side B of the detector tube and fit it with the rubber bulb.
- 3 Break side A of the detector tube and immerse broken end A in the sample solution immediately so that vapour in air may not come into the tube.
- 4 Squeeze the rubber bulb with stopping the side hole of it with a thumb, and the sample solution generates bubbles.
- (5) Squeeze the rubber bulb, then loosen grasp to restore the shape of the rubber tube with stopping the side hole of it. At this time, the sample is sucked into the reagent.
- (6) When the sample solution rises up to (C) position of the tube, remove the thumb from the side hole of the rubber bulb.
- The Remove the detector tube from the rubber bulb, read the scale at the maximum point of the stained layer.
- In case that concentration of sample solution exceeds the scale, replace it with a new tube and suck the sample until it reaches the (D) position (plug of upper top of the layer). Then the actual concentration can be obtained by using the conversion chart. (REFER TO ITEM 3. CONVERSION CHART.)

X The unit (mg/L) of concentration is converted into ppm unit with dividing the measured value by specific gravity of solution.

# 3. CONVERSION CHART:

Indicated value when sucked to (D) position (mg/L)



Actual concentration of water vapour (mg/L) Fig.2

**SPECIAL NOTE:** When the maximum point of the stained layer is unclear or oblique, read the scale at the centre between the longest and shortest points.

# 4. CORRECTION FOR OPERATING CONDITIONS:

Temperature; No temperature correction is necessary.

# 5. NOTE:

Solvent such as Alcohols and Esters, and/or solvent containing them can not be used due to dissolution of reagent, as shown in the following.

Possible to use : Benzene, Toluene, Xylene, Styrene, Hexane, Carbon tetrachloride, Trichloroethylene,

Tetrachloroethylene, Fureon, Gasoline, Kerosine, Naphtha and JP-4

Impossible to use : Alcohols, Esters, Nitrobenzene, Chloroform, 1,1,1-Trichloroethane, 1,2-Dichloroethane,

Ethane tetrachloride, Dioxane, Tetrahydrofuran and Ethyl cellosolve

# 6. CHEMICAL REACTION IN THE DETECTOR TUBE:

 $H_2O + Mg(ClO_4)_2 \rightarrow Mg(ClO_4)_2 \cdot H_2O$ 

# 7. DISPOSAL OF TUBES:

USED TUBES SHOULD BE DISCARDED CAREFULLY ACCORDING TO RELEVANT REGULATIONS. IF ANY.

# 8. USER RESPONSIBILITY:

It is the sole responsibility of the user to ensure that detector tubes are not used which are either beyond their expiration date or have a colour change different to that stated in the Performance specifications.

The Manufacturer and Manufacturer's Distributor shall not be otherwise liable for any incorrect measurement or any damages, whether damages result from negligence or otherwise.

\* Product specifications are subject to change without any prior notice.

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