

INSTRUCTION MANUAL CHLORIDE ION DETECTOR TUBE

No.201SA

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

1. PERFORMANCE:

Measuring Range	: 10 - 2000ppm
and Sampling Time	: Approx. 1.5 minutes
Sampling Volume	: over 5 mL
Colour Change	: Brown \rightarrow White
Detectable Limit	: 3ppm
Operating Temperature (Sample solution)	: $5 - 80 \degree C$ (41 - 176°F) (No correction is necessary.)
Operating pH (Sample solution)	: 3.5 - 13 (No correction is necessary.)

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 AND PH RANGE.
- 2. STORE TUBES IN A COOL AND DARK PLACE (0-25 $^\circ C/32-77^\circ F),$ and use before expiration date printed on the top of the box.
- 3. PRIOR TO USE, READ CAREFULLY ITEM 7. USER RESPONSIBILITY.
- 4. READ THE CONCENTRATION IMMEDIATELY AFTER MEASUREMENT.

2. SAMPLING AND MEASUREMENT:

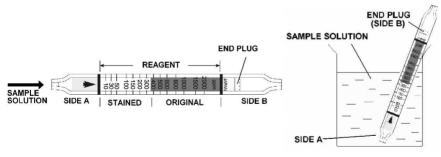


Fig.1

① Break both ends of the detector tube with attached ampule cutter.

ACAUTION SAFETY GLASSES AND GLOVES SHOULD BE WORN TO PREVENT INJURY FROM SPLINTERING GLASS.

- ③ When the sample rises up to the end plug (side B), remove the tube from the sample solution.
- ④ Read the scale at the maximum point of the stained layer.
- (5) When the concentration of sample solution is over the 2000ppm (full scale), dilute the sample solution accurately (by some ratio) with distilled or purified water and measure the sample solution and multiply reading value by the dilution ratio.

② Immerse the end of the tube with side A into the sample solution to draw it up by capillary action as shown in Fig.1. (Arrow mark shall point to the surface of the sample solution.)

- **SPECIAL NOTE:** I. The scale is calibrated at 20 °C (68°F), about pH 7. Readings obtained in other circumstances should be corrected. (**REFER TO ITEM 3. CORRECTION FOR OPERATING CONDITIONS.**)
 - II. When the maximum point of the stained layer is unclear or oblique, read the scale at the centre between the longest and shortest points.

3. CORRECTION FOR OPERATING CONDITIONS (Sample solution):

- ① Temperature; No temperature correction is necessary.
- 2 pH; No correction is necessary. (Under pH 3.5 or over pH 13 gives higher readings.)

4. INTERFERENCES:

Coexistence of Bromide ion, Iodide ion or Cyanide ion give higher readings. Sulphide ion produces a brown stain in the bottom of the discoloured layer and give higher readings. Coexistence of less than 1000ppm Sulphate ion, Nitrate ion or Iron ion does not affect the readings.

5. CHEMICAL REACTION IN THE DETECTOR TUBE:

 $Cl^- + Ag_2CrO_4 \rightarrow AgCl$

6. DISPOSAL OF TUBES: USED TUBES SHOULD BE DISPOSED CAREFULLY ACCORDING TO RELEVANT REGULATIONS, IF ANY.

7. USER RESPONSIBILITY:

It is the sole responsibility of the user of this equipment to ensure that the equipment is operated in strict accordance with this instructions and 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 Distributors shall not be otherwise liable for any incorrect measurement or any damages, whether damages result from negligence or otherwise.

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