

FOR SAFE OPERATION :

Read this instruction manual carefully prior to use.

△ CAUTION : If not observed, injuries to the operator or damage to the product may result.

1. When breaking the tube ends, keep away from eyes
2. Do not touch the broken glass tubes, pieces and reagent with bare hand(s).

△ NOTES : For maintaining performance and reliability to the test result

1. Use this tube under the temperature range of 0 - 40°C (32 - 104°F) in water.
2. Use this tube between pH values of 4.0 to 11.5. e. g. If the sample solution pH indicated below 4.0, add Potassium Carbonate Anhydrous to be pH 4.0 - 11.5 or indicating over 11.5, adjust solution with dilute hydrochloric acid.
3. This tube may be interfered by the coexisting substances. Refer to the "INTERFERENCES".
4. Shelf life and storage condition of the tube is marked on the label of the box of tube.
5. Place the lower end plug packing of the tubes below the water surface.
6. If tubes kept more than 30 minutes in the water, the printed scale of the tube will be peel off.

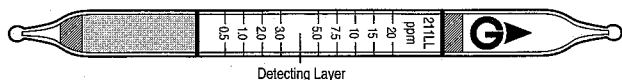
Read the concentration immediately after the sampling is completed.

APPLICATION OF THE TUBE :

Determination of Sulfide Ion in the Waste Water.

SPECIFICATION :

(As a result of Gastec's commitment to continued improvement, specifications are subject to change without notice.)



Measuring Range	0.5 - 20 ppm
Sampling Time	3 minutes
Detecting Limit	0.2 ppm
Color Change	White → Brown
Reaction Principle	$S^{2-} + Pb(CH_3COO)_2$ (White) → PbS (Brown)

**** Shelf Life :** Please refer to the Validity Date printed on the box of tube.

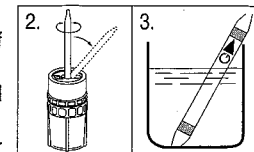
**** Store the tubes under dark and cool place.**

EFFECT BY ATMOSPHERIC CONDITION :

Temperature : No correction is required for water temperature between 0 - 40°C

MEASUREMENT PROCEDURE :

1. Take sample water into an approximately 100 ml capacity of dry, clean beaker.
2. Break tips off a fresh detector tube by bending each tube end in the tube tip breaker (tube tip stock No. 721 optional extra).
3. Immerse the filled end of the tube into the sample water illustrated as right figure. Capillary action occurs and the sample water instantly rises through the reagent. If the sample contains sulfide ion, the white reagent of the tube turns to brown color.
4. When the sample water rises up to the upper end plug, remove the tube.
5. Read concentration at the interface of the stained to unstained reagent.
6. If the stain exceeds the highest calibration mark (20 ppm), dilute the sample with pure water and retest using a fresh tube. Obtain true concentration by multiplying the tube reading by the dilution ratio.



$$\text{True Concentration} = \frac{V1 + V2}{V1} \times \text{Tube Reading}$$

V1 : Volume of Sample water

V2 : Volume of diluent (pure water)

INTERFERENCES :

Substance	Concentration	Interference	Change color by itself
SO ₃ ²⁻	≤ 20 ppm	No	No discoloration upto 1%
Cl ⁻	≤ 100 ppm	No	No discoloration upto 5%
Cr ⁶⁺	≥ 0.2 ppm	minus error	Yellow discoloration at higher than 1.0ppm
CO ₃ ²⁻	≤ 500 ppm	No.	No discoloration upto 1%
S ₂ O ₃ ²⁻	≤ 20 ppm	No	No discoloration upto 1%
I ⁻	≤ 200 ppm	No	Yellow discoloration at higher than 3000ppm
SO ₄ ²⁻	≤ 100 ppm	No	No discoloration upto 1%
PO ₄ ³⁻	≤ 100 ppm	No	No discoloration upto 1%

DISPOSAL INSTRUCTION :

Reagent of the tube is used a small amount of lead. On disposing the tube regardless of used or unused, follow the rules and regulations of the local government.

WARRANTY :

If you have any questions regarding gas detection and quality of the tubes, please feel free to contact your Gastec representatives.