Instruction Manual

HI 3835
Salinity Test Kit

HANNA instruments

www.hannainst.com

Dear Customer,

Thank you for choosing a Hanna Product. Please read the instructions carefully before using the chemical test kit. It will provide you with the necessary information for correct use of the kit.

Remove the chemical test kit from the packing material and examine it carefully to make sure that no damage has occurred during shipping. If there is any noticeable damage, notify your Dealer or the nearest Hanna office immediately.

Each kit is supplied with:

- Vial;
- Reagent 1 (30 mL);
- Reagent 2 (30 mL);
- Reagent 3 (120 mL);
- Calibrated syringe and plunger.

Note: Any damaged or defective item must be returned in its original packing materials.

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SPECIFICATIONS

Range	0 to 40 g/kg (ppt)
Analysis Method	Titrametric
Sample Size	1 mL
Number of Tests	110 (average)
Case Dimensions	200x120x60 mm (7.9x4.7x2.4")
Shipping Weight	460 g (17.2 oz.)

SIGNIFICANCE AND USE

Salinity is defined as the total solids in water after all carbonates have been converted to oxides, all bromide and iodide have been replaced by chloride and all organic matter has been oxidized. The value is in g/kg or ppt (parts per thousand). The monitoring of salinity is essential for industrial waste and seawater. The Hanna Test Kit measures salinity using a fast and efficient titrametric method. The test requires only a few simple and safe steps to obtain a result. The componenets are contained in a compact case, which makes it perfect for on-site tests.

CHEMICAL REACTION

The salinity level in g/kg is determined by a mercuric nitrate titration method. The pH is lowered to approximately 3 by addition of nitric acid. Mercuric ions react with chloride ions to form mercuric chloride. When excessive mercuric ions are present, it complexes with diphenylcarbazone to form a purple solution. The color change from yellow to violet indicates the endpoint.

$$Hg(NO_3)_2 + 2Cl^- \rightarrow HgCl_2 + 2NO_3^-$$

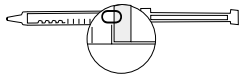
INSTRUCTIONS

READ ALL THE INSTRUCTIONS BEFORE USING THE TEST KIT

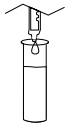
Note: Push and twist pipet tip onto tapered end of syringe ensuring an air-tight fit.

Note: Use separate pipet tips for sampling and titration.

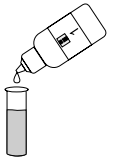
- Take the titration syringe and push plunger completely into the syringe. Insert tip into water sample and pull plunger out until the lower edge of the plunger seal is on the 0 mL mark of the syringe.



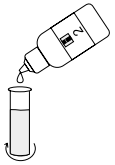
- Add the sample in the syringe to the plastic vial.



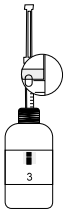
- Add 1 drop of Reagent 1 and mix carefully not to spill any of the solution. The solution will become a violet color.



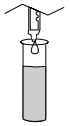
- While swirling the vial, add Reagent 2 drop by drop until the solution turns yellow. Replace the cap.



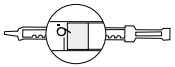
- Take the titration syringe and insert a new pipet tip. Push plunger completely into the syringe. Insert tip into Reagent 3 solution and pull plunger out until the lower edge of the plunger seal is on the 0 mL mark of the syringe.



- Place syringe tip into the plastic vial and slowly add the titration solution drop by drop, swirling to mix after each drop. Continue adding titration solution until the solution in the vial changes from yellow to violet.



- Read off the milliliters of titration solution from the syringe scale, and multiply by 40 to obtain salinity in g/kg (ppt).



ACCESSORIES

HI 3835-100 Spare reagents (100 tests)

REFERENCES

Standard Methods for the Examination of Water and Wastewater, 16th Edition, 1985.

HEALTH AND SAFETY

The chemicals contained in this kit may be hazardous if improperly handled. Read Health and Safety Data Sheet before performing this test.