

## HI 3833 Phosphate Test Kit



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Dear Customer,

Thank you for choosing a Hanna Product.

Please read this instruction manual 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:

- 1 plastic beaker (20 mL);
- 1 color comparator cube;
- HI 3833-0 Phosphate Reagent (50 pcs).

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

### Specifications

Range	0 to 5 mg/L (ppm) $\text{PO}_4^{3-}$
Smallest Increment	1 mg/L (ppm) $\text{PO}_4^{3-}$
Analysis Method	Colorimetric
Sample Size	10 mL
Number of Tests	50
Case Dimensions	220x145x55 mm (8.7x5.7x2.1")
Shipping Weight	160 g (6 oz.)

### Significance and Use

Phosphates are widely introduced into the environment from such sources as agricultural fertilizers, cleaning and laundering products, boiler water conditioners, and drinking water treatment aids.

At high levels, phosphates stimulate the growth of photosynthetic organisms which may contribute to eutrophication of lakes, rivers, and ponds. This makes it important to monitor and control phosphate discharges into the environment.

Phosphates can be classified as ortho, condensed or organically bound. As with existing test kits on the market, the Hanna Phosphate Test Kit will only determine ortho phosphate levels.

**NOTE:** mg/L is equivalent to ppm (parts per million).

### Chemical Reaction

The orthophosphate level in mg/L (or ppm) is determined by a colorimetric method. Ammonium molybdate and potassium antimonyl tartrate react in acid medium with orthophosphate to form a phosphomolybdate complex, that is reduced to intensely colored molybdenum blue by ascorbic acid. The color intensity of the solution determines the phosphate concentration.

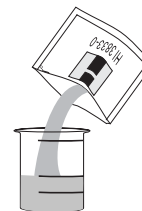
### Instructions

READ THE ENTIRE INSTRUCTIONS BEFORE USING THE KIT

- Remove the cap from the plastic vessel. Rinse the plastic vessel with water sample, fill it to 10 mL mark.



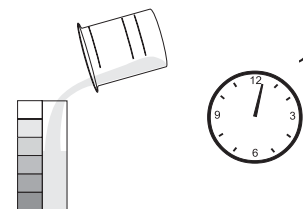
- Add 1 packet of HI 3833-0 Phosphate Reagent.



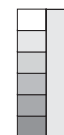
- Replace the cap and mix solution until solids dissolve.



- Remove the cap and transfer the solution into the color comparator cube. Let set for 1 minute.



- Determine which color matches the solution in the cube and record the result as mg/L (ppm) of phosphate ( $\text{PO}_4^{3-}$ ).



### References

- 1987 Annual Book of ASTM Standard, Volume 11.01 Water (1).
- Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition, 1998.

### Accessories

- HI 3833-050 replacement kit (50 tests)
- HI 3833-99 color comparator cube for phosphate kit
- HI 740032P cap for 20 ml plastic beaker (10 pcs)
- HI 740037P 20 ml plastic beaker (10 pcs)

### Safety Data Sheets

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