



WT PHOSP TEST KIT™

DESCRIPTION

The **WT PHOSP TEST KIT** is designed for the determination of Phosphate ion concentration in the water. The Phosphate ions act as scale inhibitors in the water systems while preventing the precipitation of salts which result in scale formation. At the same time they also act as corrosion inhibitors by the formation of a thin film on the metallic surfaces. With the determination of the Phosphate ion concentration, the proper dosage of **PHOSPHATE, BWT NEW FORMULA** or **BWT POWDER** can be defined, which is necessary to adjust the water conditions of the Boiler System.

TEST KIT CONTENTS

The contents of the test kit are sufficient for 100 tests as many as the number of the sticks which can be found in the metallic package.

ACCESSORIES

- 1 piece of test tube with a ring mark of 5ml
- 2 pieces of small test tubes
- 1 piece of metallic package with 100 test sticks and a color indicator

REAGENTS

- 1 bottle of 30ml reagent solution Phosphate-1
- 1 bottle of 30ml reagent solution Phosphate-2

PACKAGING

Order Number : 700109

Container : Plastic Case

TESTING PROCEDURE

Pre-treatment

Before testing, samples must be cooled to 25°C by passing them through a cooler.

A. Determination of Phosphate Ions (PO_4^{-3}) concentration

1. Rinse the test tube several times from the sample you wish to determine the Phosphate ions concentration PO_4^{-3} and fill it with the sample water to the ring mark of 5ml mark.
2. Add 5 drops of the reagent solution Phosphate-1 (Nitric Acid 19%) and shake it carefully.



3. Take one of the two small test tubes and fill it carefully with 6 drops of the reagent solution Phosphate-2 and keep the solution. You may put it in the recess of the test kit plastic package.
4. Remove from the metallic package as many sticks as required for the measurement and re-seal the container after use. Do not touch the test paper zone.
5. Place the test stick into the prepared sample from the step 2 and leave it in the solution for about 15 seconds while shaking carefully.
6. Then place the test stick into the small test tube which filled with the solution Phosphate-2 from the step 3, for about 15 seconds.
7. Remove the stick from the small tube and after 60 seconds compare the color of the stick with the color scale on the metallic package. If the Phosphate ions are present the colour changes to blue green.

B. Evaluation of the Test Results

With this procedure we can determine directly the Phosphate ions concentration in the Boiler System.

For samples less than 20ppm of Phosphate ions concentration the Boiler System has to be supplied with the relevant **PHOSPHATE, BWT NEW FORMULA** or **BWT POWDER** dosage according to the following table.

For samples greater than 40ppm of Phosphate ions concentration perform blowdown, replenish with fresh water and check again the Phosphate ions concentration.

The dosage which has to be applied of the



TABLE: Concentration of Phosphate ions (PO₄⁻³) in ppm (Boiler System)

ppm PO ₄ ⁻³	0–10	10–20	20–40	40+
PHOSPHATE	30gr /tn of water	15gr /tn of water	Satisfactory	Blowdown
BWT NEW FORMULA	0.6lt /tn of water	0.3lt /tn of water	Satisfactory	Blowdown
BWT POWDER	40gr /tn of water	20gr /tn of water	Satisfactory	Blowdown

PHOSPHATE, BWT NEW FORMULA or BWT POWDER anytime you perform the test in the Boiler System is described by the table above.

Initial dosage of PHOSPHATE:

50gr/tn of water

Initial dosage of BWT NEW FORMULA:

1lt /tn of water

Initial dosage of BWT POWDER:

200gr/tn of water

C. Additional Information

Making treatment in the Boiler system by the introduction of **BWT NEW FORMULA** or **BWT POWDER** to adjust the Phosphate, will significantly affect the Alkalinity and Sulfite concentrations. So it is recommended when you treat the system with these products you check all the concentrations in the Boiler system and the pH value as well.

Should you need to adjust only the Phosphate concentration then you have to make treatment using Phosphate. In this case however it will affect the alkalinity but it shouldn't cause a significant change in the alkalinity's value.

After the test results are obtained, they must be recorded in the **Marichem Boiler Water Treatment Log Sheets**. At the end of every month, these Log Sheets should be submitted by the engineer responsible to the owner company, who in turn should send them to **MARICHEM MARIGASES Worldwide Services** for further evaluation and technical analysis.

For more information and literature concerning the **WT PHOSP TEST KIT** measurements and the **Boiler Water Treatment program**, feel free to contact the **MARICHEM MARIGASES Worldwide Services** technical department.

Read the Material Safety Data Sheet before using this product.

For detailed information on safety and health, please refer to Material Safety Data Sheet and/or Product Label.

MARICHEM MARIGASES Worldwide Services or any subsidiary or associated companies warranties of merchantability and competence, if any, along with any expressed warranties concerning this merchandise, shall not be actionable or pertinent or effective if the good is used contrarily or differently to the directions herein and in no other way due to impending hazards from inappropriate use of the good explained herein. Merchandise might vary insubstantially depending on country of origin. The information provided concerning merchandise is exclusively presented to the customer.