

# PHOSPHATE VACUVIAL TEST KIT (12.0)



## DESCRIPTION

The Phosphate VacuVial Test Kit (12.0) provides an easy, safe and accurate method for testing boiler water phosphate levels. The vacuum-sealed ampoules contain premeasured reagent, thereby, minimizing operator contact. The digital test result display eliminates guesswork. Simply snap a Vacu-vials self-filling ampoule in a boiler water sample, insert the ampoule into the cell compartment, and read the results. Sample preparation steps are reduced which means reduction in testing time and errors. The Phosphate VacuVial Test Kit (12.0) is packaged with everything you need including 4 AAA alkaline batteries.

## APPLICATION & USE

Boiler water phosphate should be tested daily using the Phosphate VacuVial Test Kit (12.0).

Before testing, boiler water samples must be cooled to 25° C by collecting through a sample cooler for safety and to prevent flashing that will concentrate the sample.



## TEST KIT CONTENTS

Phosphate Vacu-vials test kit (PCN 1AB3165) contains:  
1 Phosphate Vacu-vials refill, 30 Ampoules  
1 Sample Cup  
1 Test Tube  
1 Blank Ampoule  
1 Light Shield  
Instructions

## ORDER INFORMATION PCN

Phosphate VacuVial Test Kit (12.0) complete	1AB3165
Vacu-vials Blank Pack, pkg of five	0390039
Phosphate Vacu-vials refill, 30 ampoules	0390021
Light Shield Pack, package of one	0390047
Sample Cup Pack, package of six	0390062
Filter Paper, box of 100 sheets	0225012
Test Tube Pack, 13 mm, package of ten	0390054
Funnel, Plastic	0221010

**NOTE:** Filter a cooled boiler water sample before running this test. Filter paper and funnel are supplied separately.

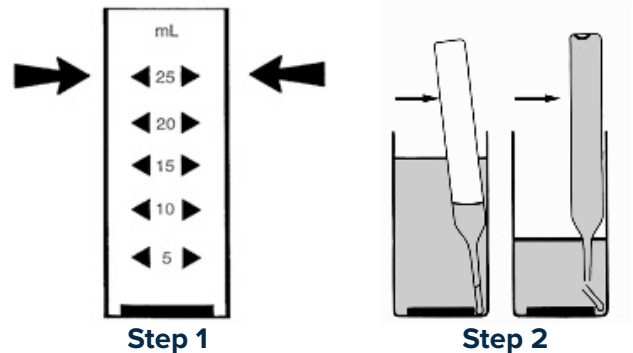


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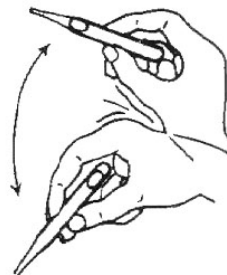
## PROCEDURE

### To Set Zero

1. Press the Power key.
2. The display will show "PHOS".
3. Insert the supplied ZERO ampoule, flat end first, into the sample cell compartment (with mild downward pressure), making sure that it is fully seated.
4. Place the light shield over the ZERO ampoule.
5. Press the Zero/Test key. The "PHOS" symbol will flash for approximately 8 seconds, then the display will show "0.0.0".



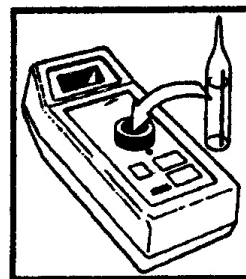
1. Fill the sample cup to the 25-ml mark with cooled, filtered boiler water.
2. Place the Phosphate Vacu-vials ampoule in the sample cup. Snap the tip by pressing the ampoule against the side of the cup. The ampoule will fill, leaving a small bubble to facilitate mixing.
3. Mix the contents by inverting the ampoule, showing the bubble to travel from end to end. Wipe all liquid from the exterior. Wait 5 minutes.
4. Insert the Vacu-vial ampoule, flat end first, into the sample cell compartment (with mild downward pressure), making sure that it is fully seated.
5. Place the light shield over the test ampoule.
6. Press the Zero/Test key. The "PHOS" symbol will flash for approximately 3 seconds, then the sample test results will appear in the display as ppm (mg/Liter).



**Step 3**



**Step 4**



**Step 5**

### OPERATING TIPS

- Wipe the Vacu-vials blank ampoule clean before each use.
- Upon start up, the photometer automatically proceeds to the zeroing process. Every time the photometer powers on, it must be re-zeroed.
- To re-zero the photometer, it must be turned off and back on again.
- A series of readings can be taken without re-zeroing, as long as the photometer stays on during the series.
- Protect photometer from extreme humidity, corrosive fumes and dusty areas. Store in a cool, dry place.
- Remove the batteries when photometer is not in use.
- Press the ! key to turn the display back light on or off.
- When moving the photometer from one temperature extreme to another, wait at least 10 minutes before use to



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- allow photometer to come to temperature equilibrium.
- Contamination of the optics in the sample chamber will result in incorrect measurements. The windows in the sample chamber should be checked at regular intervals and cleaned as necessary. Use a soft moist cloth or cotton swab for cleaning purposes.
- If the sample cell adapter has been removed, it must be replaced with proper orientation, aligning the triangle on the adapter with the triangle on the photometer.
- **Colored Samples:** A 13mm test tube may be used to zero the instrument when the sample is colored. Dilute 7.5 mls of sample to 10 mls with distilled water. Use this diluted sample to zero the photometer. Another method is to dilute the sample by 50 percent (with distilled water) or other appropriate percent dilution, proceed with steps 1-6, multiply the end result by 2 or other appropriate factor.
- There is an automatic shut-off after 15 minutes of non-use.



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Drew Marine maintains Safety Data Sheets on all of its products. These documents contain health and safety information for the development of appropriate product handling procedures to protect your employees. Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Drew Marine products.



# **Drew Marine®**

**100 South Jefferson Road  
Whippany, NJ 07981 USA  
1-973-526-5700  
Drew-Marine.com**

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