

# pH - PHENOL RED

TABLET · CODE 3672-SC

QUANTITY	CONTENTS	CODE
100	pH PHENOL RED Tablets	3880A-H
1	Tablet Crusher	0175

**\*WARNING:** Reagents marked with an \* are considered to be potential health hazards. To view or print a Safety Data Sheet [SDS] for these reagents go to [www.lamotte.com](http://www.lamotte.com). Search for the four digit reagent code number listed on the reagent label, in the contents list or in the test procedures. Omit any letter that follows or precedes the four digit code number. For example, if the code is 4450WT-H, search 4450. To obtain a printed copy, contact LaMotte by email, phone or fax.

Emergency information for all LaMotte reagents is available from Chem-Tel: [US, 1-800-255-3924] [International, call collect, 813-248-0585].

The term pH [always written with a lower-case p and an upper case H] is correctly defined as the negative logarithm of the hydrogen ion concentration. More simply, the term pH can be considered to be an index of the amount of hydrogen ion present in a substance, or is a measure of the acidity of the substance. This index is important as it can be used to quickly identify the acid, neutral or alkaline [basic] nature of materials. Acidic substances have a pH less than 7.0, neutral substances have a pH equal to 7.0 and alkaline substances have a pH greater than 7.0.

Most natural waters have pH values from pH 5.0 to pH 8.5. Acidic, freshly fallen rain water may have a pH value of pH 5.5 to pH 6.0. When it reacts with soils and minerals containing weakly alkaline materials, the hydroxyl ion concentration will increase and the hydrogen ion concentration will decrease. Then the water may become slightly alkaline with a pH of 8.0 to 8.5. Natural sea water has a pH value of 8.1, and changes from this value indicate that water from an inland source is entering the body of sea water.

Waters more acidic than pH 5.0 and more alkaline than pH 8.5 to 9.0 should be viewed with suspicion. Mine drainage and acidic industrial wastes are the principal factors in increasing the acidity of water, and alkaline industrial wastes are the cause of high pH values.

Because pH measurements can be made so simply, and because they can tell so much about the past and future reactions of water, they are routinely made in water quality studies. Sudden changes in pH values serve as warning signals that water quality may be adversely affected through the introduction of contaminants.

Test Procedures

APPLICATION: Drinking, surface, and saline waters, swimming pool water, domestic and industrial wastes.

RANGE: 6.6 to 8.4

MDL: Not Applicable

METHOD: The phenol red indicator exhibits a specific color change over a narrow pH range. The color changes are measured colorimetrically.

SAMPLE HANDLING & PRESERVATION: Sample should be analyzed immediately after collection.

INTERFERENCES: Sample color and turbidity interfere with the colorimetric pH measurement. Color interference may be removed by standardizing the instrument with the original water sample. Two drops of 0.1N sodium thiosulfate per 100 mL of sample will eliminate chlorine interference.

## PROCEDURE

1. Press  and hold until colorimeter turns on.
2. Press  to select **Testing Menu**.
3. Select **All Tests** (or another sequence containing **076 pH T**) from **Testing Menu**.
4. Scroll to and select **076 pH T** from menu.
5. Rinse a clean tube [0290] with sample water. Fill to the 10 mL line with sample.
6. Insert tube into chamber, close lid and select **Scan Blank**.
7. Remove tube from colorimeter. Add one pH PHENOL RED Tablet [3880A]. Crush with Tablet Crusher [0175]. Cap.
8. Invert 3 times to mix.
9. Insert tube into chamber. Close lid. Select **Scan Sample**.
10. Press  to turn colorimeter off, select Print Test to print the results, or press  to exit to a previous menu or make another menu selection.



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