HEALTH AND SAFETY INFORMATION

Tablets for chemical testing only

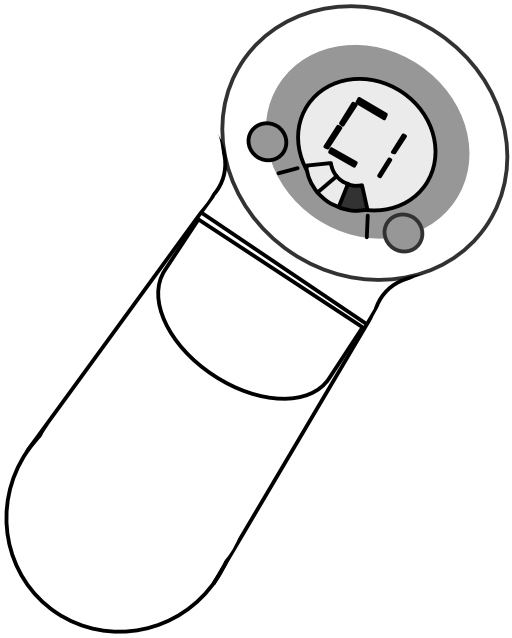
Not to be taken

Keep out of reach of children

Palintest®

INST.163/1

PRECISION PHOTOMETER FOR MEASURING WATER QUALITY OF POOLS AND SPAS



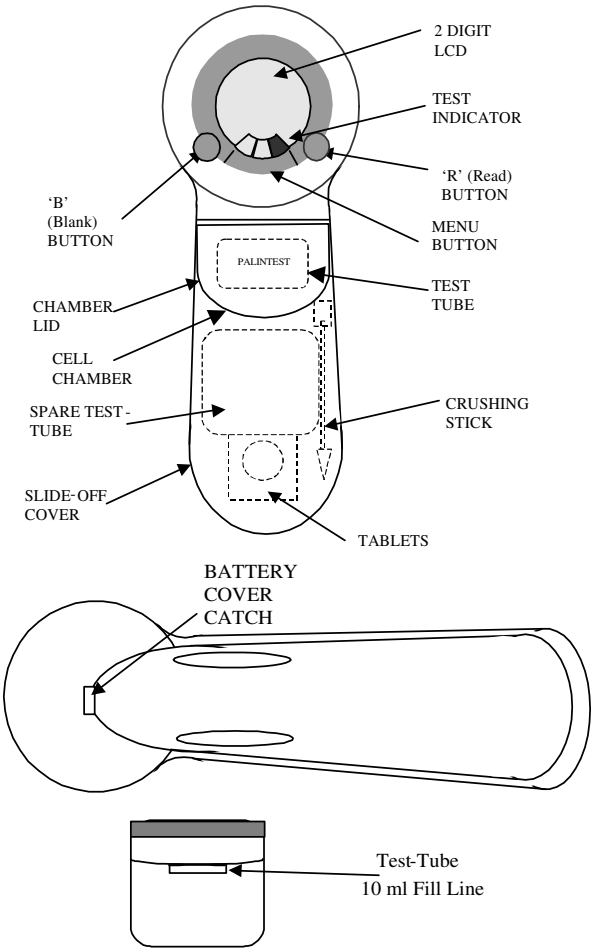
- Three water quality tests
- Complete with all equipment
- Handy storage compartment
- Simple to use
- Error message display

Your meter is programmed to perform the following tests :-

pH	6.8 – 8.6
Chlorine	0 – 5.0 ppm
Alkalinity	0 – 500 ppm

Palintest Ltd, Kingsway, Team Valley, Gateshead,
Tyne & Wear NE11 0NS England

Tel: 0191 491 0808 Fax: 0191 482 5372
E-Mail: palintest@palintest.com



FITTING THE BATTERY

1 To fit battery, first remove the battery cover from the back of the instrument by releasing the catch 'B' and lifting off.

2 Pull out the battery connector until the wires are fully extended.

3 Clip the connector onto the battery.

4 Holding the wires clear of the battery slide the battery into the compartment so the bottom goes in first.

Your Pool Chemical Supplier will advise you on the recommended Water Quality Values of your chosen chemical treatment regime and how to achieve the ideal water quality. His recommendations may differ from those above for your pool.

TEST CONTAMINATION

When using the instrument, it is vitally important to avoid contamination between the different test reagent systems.

Always ensure that test tubes, test tube caps and stirring rods are thoroughly washed between tests and when changing from one reagent system to another. Avoid handling the tablets as traces of the reagents on fingers can cause contamination.

CARE AND MAINTENANCE

Keep the test tubes clean. Place the plastic caps on the tubes before taking a reading. Prevent test solutions being spilt into the instrument and to avoid excessive amounts of moisture entering the instrument under out-door conditions. Wipe off spillages and moisture immediately with a dry cloth. On no account should solvents or abrasive materials be used to clean the instrument.

OPERATING INSTRUCTIONS

Accessories

Reagents and equipment required for each test are provided with the instrument. A second test tube, reagents and crushing stick are stored in the handy storage compartment. Simply slide off the cover to access the compartment. Follow the instructions below carefully to obtain the best results.

Sequence

1 Decide which test you are doing.

2 Prepare a blank.

3 Prepare the sample.

4 Switch on instrument by pressing any button and select the test you require by pressing the menu button repeatedly.

5 Insert the blank, close the lid and press the button marked 'B'. A zero will be displayed to indicate that the instrument is set.

6 Remove the blank and insert the sample and close the lid. Press the button marked 'R'. The reading displayed is the concentration of chemical in the water. For chlorine it is displayed as parts per million (mg per litre) and for pH as pH units.

   For alkalinity a multiplier is used to get the result.

Preparing the Blank Tube

Fill a sample tube with pool water to the mark and replace the lid. The same blank tube is used for all tests.

Preparing the Sample Tube (Chlorine)

Make sure the tube is clean by rinsing with pool water. Leave a small volume of pool water in the tube and add a DPD No 1 tablet and crush to dissolve. Fill the tube with pool water to the mark. Stir until all particles have dissolved and then replace the lid.

This is the sample tube for chlorine.

Preparing the Sample Tube (pH)

Fill the sample tube to the mark with pool water and add one pH tablet. Stir to dissolve the tablet and then replace the lid.

This is the sample tube for pH measurement.

Preparing the Sample Tube (Alkalinity)

Fill a sample tube to half way up with pool water. Add one Alkaphot tablet, crush and mix well. Fill to the mark with more pool water. Mix using the crushing stick until all the tablet has dissolved. Stand for one minute and then remix.

This is the sample tube for Alkalinity.

The alkalinity reading is multiplied by 10 to obtain alkalinity concentration in ppm.

ERROR MESSAGES

A number of error messages are available to help the user :-

Lo	Reading is off scale low
Hi	Reading is off scale high
E1	User has forgotten to Blank the meter OR Lid has been left open while Blanking
E2	Blank and Sample tubes mixed up and used in the wrong order.
E3	Internal error. Allow meter to switch off then start again.
E4	Check a correct blank tube has been used. Check cell chamber and test tubes are clean.

RESULTS

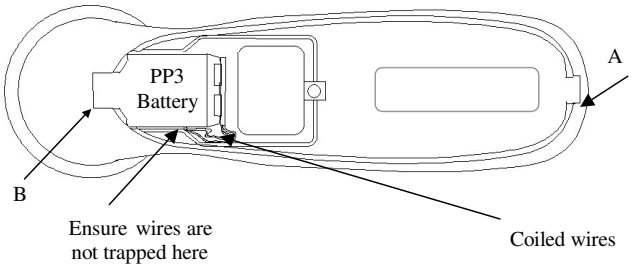
For Guidance only results should be :-

Chlorine Treated Pools and Spas

pH between 7.2 and 7.8
(Ideal range 7.4 to 7.6)

Free Chlorine between 1.0 and 3.0 ppm (Ideal range 1.5 to 2.0 ppm)

Ideal Alkalinity is from 100 to 200 ppm



5 Twist the wires and push down into the area shown above.

6 Replace the battery cover by locating in slot ‘A’ and then closing onto slot ‘B’.

7 Check that the cover is on correctly and there is no gap around the side of the instrument.

CHANGING THE BATTERY

The battery life indicator at the top of the screen shows :-

Battery ‘full’ display 

Battery ‘empty’ display 

Change the battery when the indicator shows empty. The symbol will flash and the instrument will switch off when the battery is completely spent.