

PH_Meter_For_Soil_Testing_2002.txt

Subject: pH Meter

Date: 26 dec 02

For Checker 1 - Stick model ?Checker? with replaceable HI 1270 screw-type, combination, pH electrode see

<http://www.hannainst.com/products/testers/checker.htm>

I have found the above pH meter to be the most cost effective and best for use with, plant source water, water from soil (soil ph), urine, and saliva testing. This unit costs \$25 and I recommend it for after PS use. The batteries will last about 3,000 hours of use and are easy to change. pH paper may be impractical for a while after the PS during rain and wet weather. This unit will not last forever but neither does pH paper.

The unit is not temperature compensated. However, I have found that if one calibrates the unit for room temperature (about 70 deg F) and is measuring urine or saliva (at 98.6 deg F) that if one adds .2 to the ph reading it will be very close to accurate. The way to occasionally check this is to let the solution cool off to room temperature and take the difference between the readings.

I also recommend you check the calibration at regular intervals (about every month). This would depend on the use. I keep small 2 oz plastic bottles of standard buffer solution for ph 7.0, 10.0, and 4.0 for use with calibration. One tests and adjusts the unit to 7.0 washing the electrode off between solutions. Then use 4.0 or 10.0 depending on whether measuring mostly acid or base. When the unit is calibrated (changing trim pots to match the buffer solution) the measurements are more accurate than pH paper.

Once in use one keeps the electrode wet with storage solution or distilled water. I keep the unit upright ready to use with the electrodes constantly kept wet. This can be done by drilling a hole in the cap of a small bottle (plastic pill bottle will work).

Clarkson Lab and Supply Inc has the units listed as:

Part number	Price
HAN HI98103 Checker 1 pH Tester W/electrode	At \$25.00

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BS0170-07F Buffer standard solution pH 7.00 1 qt. At \$8.50
BS0170-04F Buffer standard solution pH 4.00 1 qt. At \$8.50
BS0170-10F Buffer standard solution pH 10.00 1 qt. At \$8.50

Phone# 619 425-1932

<http://www.clarksonlab.com/contact.htm>

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