

HI96713 · HI96717

Phosphate Portable Photometers

- **CAL Check™**
 - Allows for performance verification and calibration of the meter using NIST traceable standards
- **GLP**
 - Review of the last calibration date
- **Auto-shut off**
- **Battery status indicator**
- **Built-in timer**
 - Display of time remaining before a measurement is taken. Ensures that all readings are taken at the appropriate reaction intervals for the test being performed.
- **Error messages**
 - Messages on display alerting to problems including no cap, high zero, and standard too low
- **Cooling lamp indicator**



The HI96713 portable photometer is for the low range measurement of phosphate while the HI96717 measures high range. Hanna's portable photometers feature an advanced optical system; the combination of a special tungsten lamp, a narrow band interference filter, and silicon photodetector ensure accurate photometric readings every time. The Hanna exclusive CAL Check feature utilizes ready-made, NIST traceable standards to verify both meter validation and calibration. The exclusive cuvette locking system ensures that the cuvette is inserted into the measurement cell in the same position every time to maintain a consistent path length.

Significance of Use

Phosphates are present in a number of products that are used by humans everyday. Some examples of the effects of phosphates are enhancing the flavor and tartness of cola drinks, as a buffering agent in controlling pH in antifreeze and delaying darkening of cut potatoes used in making french fries. Phosphates are also extensively used in detergents and cleaning fluids because of their ability to soften water and remove soil deposits.

Phosphates are particularly important for the growth and development of plant roots, and hence are one of the most common fertilizers used in agriculture. However, high concentrations of phosphates in agricultural runoff can cause environmental pollution, as they are a primary cause of eutrophication. Local laws govern the use of phosphates and the discharge levels into streams.

Specifications	HI96713 Phosphate LR	HI96717 Phosphate HR														
Range	0.00 to 2.50 mg/L (ppm)	0.0 to 30.0 mg/L (ppm)														
Resolution	0.01 mg/L	0.1 mg/L														
Accuracy @ 25°C (77°F)	±0.04 mg/L ±4% of reading	±1.0 mg/L ±4% of reading														
Light Source	tungsten lamp															
Light Detector	silicon photocell with narrow band interference filter @ 610 nm	silicon photocell with narrow band interference filter @ 525 nm														
Power Supply	9V battery															
Auto-off	after ten minutes of non-use in measurement mode; after one hour of non-use in calibration mode; with last reading reminder															
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing															
Dimensions	192 x 104 x 69 mm (7.6 x 4.1 x 2.7")															
Weight	320g (11.3 oz.)															
Method	adaptation of the ascorbic acid method	Amino Acid Method, adapted from Standard Method for the Examination of Water and Wastewater														
Ordering Information	<p>HI96713 and HI96717 are supplied with sample cuvettes (2) with caps, 9V battery, instrument quality certificate and instruction manual. CAL Check standards and testing reagents sold separately</p> <p>HI96713C and HI96717C include photometer, CAL Check standards, sample cuvettes (2) with caps, 9V battery, scissors, cuvette wiping cloth, instrument quality certificate, instruction manual and rigid carrying case. Reagents sold separately</p>															
Reagents and Standards	<table border="1"> <tbody> <tr> <td rowspan="3">HI96713</td> <td>HI96713-11</td> <td>CAL Check standard cuvettes</td> </tr> <tr> <td>HI93713-01</td> <td>reagents for 100 tests</td> </tr> <tr> <td>HI93713-03</td> <td>reagents for 300 tests</td> </tr> <tr> <td rowspan="3">HI96717</td> <td>HI96717-11</td> <td>CAL Check standard cuvettes</td> </tr> <tr> <td>HI93717-01</td> <td>reagents for 100 tests</td> </tr> <tr> <td>HI93717-03</td> <td>reagents for 300 tests</td> </tr> </tbody> </table>	HI96713	HI96713-11	CAL Check standard cuvettes	HI93713-01	reagents for 100 tests	HI93713-03	reagents for 300 tests	HI96717	HI96717-11	CAL Check standard cuvettes	HI93717-01	reagents for 100 tests	HI93717-03	reagents for 300 tests	
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