

Phosphate Portable Photometers

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- CAL CHECK™
- User calibration
- Certified calibration and verification standards
- BEPS (Battery Error Prevention System)
- TIMER function
- Auto shut-off
- GLP Features

Phosphates are particularly important for the growth and development of plant roots, and hence are one of the most common fertilizers used in agriculture.

Phosphates are also utilized in detergents and are needed, in small quantities, for heating systems. However, high concentrations of phosphates can cause environmental pollution as they are a primary cause of eutrophication.

For these reasons, it is necessary to closely monitor the phosphate levels present in both municipal and industrial waste water.

The HI 96713 measures phosphate (PO_4^{3-}) content in water, wastewater and seawater in the 0.00 to 2.50 mg/L (ppm) range.

The HI 96717 measures the phosphate (PO_4^{3-}) content in water samples in the 0.0 to 30.0 mg/L (ppm) range.

Phosphates are present in a number of products that are used by humans everyday. Some examples of the effects of phosphate 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 for french fries.

Phosphates are also extensively used in detergents and cleaning fluids because of their ability to soften water and remove soil deposits.

The largest use of phosphates is in the conversion of the mineral apatite, which is a mixture of calcium phosphate and other calcium compounds that are used in fertilizers. Local laws govern the use of phosphates and the discharge levels into streams.

SPECIFICATIONS	HI 96713 Phosphate LR	HI 96717 Phosphate HR
Range	0.00 to 2.50 mg/L (ppm)	0.0 to 30.0 mg/L (ppm)
Resolution	0.01 mg/L (ppm)	0.1 mg/L (ppm)
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	360 g (12.7 oz.)	
Method	adaptation of the ascorbic acid method	Amino Acid Method, adapted from Standard Method for the Examination of Water and Wastewater

The reagents are in powder and liquid form and are supplied in packets and bottles. The amount of reagent is precisely dosed to ensure the maximum repeatability.

For a complete list of Reagents, see Reagents Section 18.

ORDERING INFORMATION

HI 96713 and HI 96717 are supplied with sample cuvettes (2) with caps, 9V battery and instruction manual.

CAL CHECK™ standards and testing reagents sold separately

HI 96713C and HI 96717C include photometer, sample cuvettes (2) with caps, 9V battery, scissors, cuvette cleaning cloth, instrument quality certificate, instruction manual and rigid carrying case.

CAL CHECK™ standards and testing reagents sold separately

REAGENTS AND STANDARDS

For HI 96713

HI 96713-11 CAL CHECK™ standard cuvettes

HI 93713-01 Reagents for 100 tests

HI 93713-03 Reagents for 300 tests

For HI 96717

HI 96717-11 CAL CHECK™ standard cuvettes

HI 93717-01 Reagents for 100 tests

HI 93717-03 Reagents for 300 tests