HI96713 • HI96717

Phosphate Portable Photometers

- CAL Check™
  - Enables users to check validity of calibration
- BEPS
  - Alerts the user of low battery power that could adversely affect reading
- GLP Features
  - Meets Good Laboratory Practices

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.

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.

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.

Phosphates are also utilized in detergents and are needed in small quantities for heating systems.

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

The HI96713 measures phosphate (PO_4^{3-}) content in water, wastewater and sea water in the 0.00 to 2.50 mg/L (ppm) range.

The HI96717 measures percent phosphate (PO_4^{3-}) content in water samples in the 0.0 to 30.0 mg/L (ppm) range.

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	193 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
Ordering Information	**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 **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	

Reagents and Standards			
	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

Standard reagents begin on page 10.70; CAL Check™ standard reagents begin on page 10.71