



YSI Chlorophyll Sensor

Measure Chlorophyll Fluorescence with a Self-cleaning Sensor

Determine phytoplankton concentrations by detecting the fluorescence from chlorophyll *in situ* with the YSI 6025 Chlorophyll sensor.



The YSI 6025 Chlorophyll Sensor

- *In situ* monitoring
- Self-cleaning sensor for long-term deployment
- Field-replaceable
- Complements extractive analysis for accurate trending
- Use data in predicting Harmful Algal Blooms

Take Advantage of YSI's New V2 Sondes

Expand your optical monitoring capability and upgrade your 6820, 6920 or 6600. V2 upgrades increase the number of optical ports on your sonde, allowing for measurement of additional optical sensors including:

- Chlorophyll
- Blue-Green Algae - Phycocyanin (for freshwater applications)
- Blue-Green Algae - Phycoerythrin (for marine applications)
- ROX™ Optical Dissolved Oxygen
- Turbidity
- Rhodamine

Upgrades are available from YSI Authorized Service Centers. Contact YSI for details.

Pure
Data for a
Healthy
Planet.®
Predict algae blooms and
determine nutrient loading

Sensor performance verified*

The performance of the YSI 6025 Chlorophyll Sensor was verified through the US EPA's Environmental Technology Verification Program (ETV).





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Yellow Springs, Ohio Facility

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*Sensors with listed with the ETV logo were submitted to the ETV program on the YSI 6600EDS. Information on the performance characteristics of YSI water quality sensors can be found at www.epa.gov/etv, or call YSI at 800.897.4151 for the ETV verification report. Use of the ETV name or logo does not imply approval or certification of this product nor does it make any explicit or implied warranties or guarantees as to product performance.

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Chlorophyll Basics

Chlorophyll in various forms is bound within the living cells of algae, phytoplankton, and other plant matter found in water. Chlorophyll is a key component in the process of photosynthesis, the critical process in which energy from sunlight is used to produce life-sustaining oxygen. The amount of chlorophyll in a water sample is used as a measure of suspended phytoplankton, the magnitude of which can significantly affect the overall quality of water.

Technology Developments

Before the YSI 6025 chlorophyll sensor made *in situ* measurement convenient, the common way to measure chlorophyll was to collect samples and use extractive analysis in a laboratory, or take large equipment to the field. Extractive analysis methods, though highly accurate, are time-consuming and require an experienced analyst. The YSI optical, fluorescence probe is quick and efficient to use, and enables spot sampling in remote areas as well as continuous or interval monitoring.

YSI 6025 Chlorophyll Sensor Specifications

	Range	Detection Limit	Resolution	Linearity
Chlorophyll* 6025 Sensor* 	~0 to 400 µg/L 0 to 100 RFU	~0.1 µg/L [§]	0.1 µg/L Chl 0.1% RFU	R ² > 0.9999**
<ul style="list-style-type: none"> Maximum depth rating for all optical probes is 200 feet, 61 m. RFU = Relative Fluorescence Units ~ = Approximately 	Explanation of Ranges can be found in the 'Principles of Operation' section of the 6-Series Manual, Rev D.	§ Determined from cultures of <i>Isochrysis sp.</i> and chlorophyll <i>a</i> concentration determined via extractions.		**Relative to serial dilution of Rhodamine WT (0-500 ug/L).

Applications include:

Ocean and Coastal Studies

- Investigate the distribution of phytoplankton in marine systems
- Check the algae in different layers and columns of water

River, Lake, Pond, and Reservoir Management

- Monitor growth of phytoplankton due to high concentrations of plant nutrients
- Observe the algae population and distribution in lakes and reservoirs
- Sample phytoplankton at different depths to profile lakes and reservoirs
- Monitor ponds where algae control is of concern (eutrophication)

Drinking Water from Rivers, Lakes, and Reservoirs

- Monitor algae blooms which may be toxic
- Minimize filtration system clogs through early detection of algae blooms

Aquaculture

- Estimate changes in quantity of phytoplankton when used as a food source
- Manage dissolved oxygen requirements based on algae blooms
- Optimize amounts of phytoplankton in larval tanks