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Algae Enumeration And Identification

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Algae Enumeration and Identification

Algae are ubiquitous in virtually all aquatic environments and are important bioindicators of water quality. They are frequently used to assess and monitor the health of aquatic systems. On the other hand, they are also responsible for imparting undesirable flavors to potable water supplies and pose potential health threats, particularly during algal blooms. Some species of algae produce toxins (i.e., cyanobacteria including *Anabaena* and *Microcystis* species) which can lead to clinical symptoms such as gastroenteritis, pneumonia, and blistering of skin. *Pfiesteria*, *Gymnodinium breve*, *Alexandrium tamarense* and others have been associated with harmful algal blooms in U.S. estuaries and coastal waters.

ASI routinely identifies and enumerates algae in water samples. A sample is treated with iodine and filtered through a #1.0 µm polycarbonate filter. The filter is then placed in sterile, buffered water, vortexed, and sonicated. An aliquot of the extract is then microscopically examined for algae and are identified using keys and reference manuals.

Algae enumerations are usually expressed in algal cells per milliliter. ASI has an extensive library of permanent reference slides which the analysts use to verify correct identifications. Algal analyses are particularly helpful in determining the cause of taste and odor problems, poor filter run times, and the potential health effects of cyanobacterial blooms.