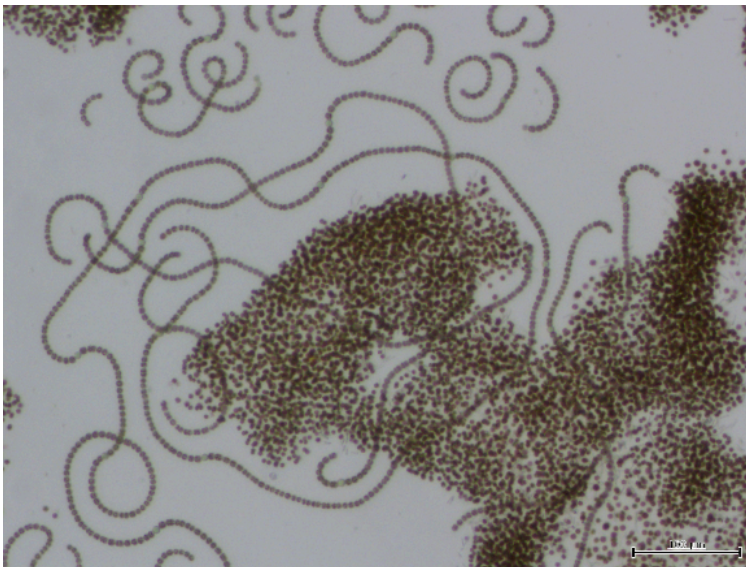


TOXIC CYANOBACTERIA DETECTION IN FRESH WATER RESERVOIRS

DESCRIPTION

Cyanobacteria constitute a diverse group of bacteria existing almost everywhere on the globe. They are important players in global nutrient cycles and have wide-ranging biotechnological and medical applications. Nevertheless, some cyanobacteria produce toxins. Blooms (large aggregates accumulated on or near water surfaces) of toxic cyanobacteria, especially those developing in water bodies used for drinking purposes, concern environmentalists and policy makers worldwide due to their environmental, economical, and public health implications.



In Spain, cyanobacteria grow in major Spanish rivers and reservoirs. Blooms develop at least once a year in some of these reservoirs and include species that produce a potent liver toxin - Microcystins.

scientific & technical offer

IMDEA-WATER SOLUTIONS

At IMDEA-Agua, we are experts on cyanobacteria physiology and toxin production in fresh water reservoirs and we are developing cutting-edge tools to monitor toxic cyanobacteria blooms.

Currently, we are focused on two technological lines: 1) Developing technology for the efficient and low-cost removal of microcystins during water treatment. 2) Designing and tailoring monitoring programmes for the control of toxic cyanobacteria blooms in reservoirs.

Moreover, we have facilities for measuring microcystins using LC-QTOF-MS/MS, HPLC-UV and to detect potential microcystins-producing cyanobacteria using qPCR.

IMPLEMENTATION SECTOR

- Potabilization and water purification companies; water supply companies
- Water resource managers
- Business related to recreational use of water in reservoirs and lakes
- Animal husbandry
- Hydroelectric companies

ADDITIONAL INFORMATION

<http://www.madrimasd.org/blogs/remtavares/2011/02/02/131556>

TECHNOLOGY KEYWORDS

Detection, monitoring, removal, microcystins, cyanobacteria blooms, HABS, cyanoHABS

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