Abstract

Brazil has a history of blooms and contamination of freshwater systems by cyanobacterial toxins. The monitoring relevance of toxins from cyanobacteria in reservoirs for public supply is notorious given its high toxicity to mammals, included humans beings. The most recurrent toxins in Brazilian water bodies are microcystins (MC). However, the recent record of cylindrospermopsin (CYN) in northeastern Brazil, Pernambuco state, alerts us to the possibility that this could be escalating. This study reports occurrence of MC and CYN, quantified with ELISA, in 10 reservoirs, devoted to public drinking supply in northeastern Brazil. The composition and quantification of the cyanobacteria community associated with these water bodies is also presented. From 23 samples investigated for the presence of MC, and CYN, 22 and 8 out were positive, respectively. Considering the similarity of the cyanobacteria communities found in reservoirs from Pernambuco, including toxin-producing species associated to MC and CYN, we suggest that geographic spreading can be favored by these factors. These issues emphasize the need for increased monitoring of MC and CYN in drinking supply reservoirs in Brazil.

Keywords

Key words, bloom, harmful algae, monitoring, toxin, water quality.