CHARACTERIZATION OF MICROCYSTINS FROM ELEVEN BRAZILIAN STRAINS OF *MICROCYSTIS* BY ESI-MS/MS

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Toxins produced by cyanobacteria, such as the peptide microcystins (MC), in aquatic ecosystems may exhibit extreme hepato- or neurotoxic behavior. MC has been implicated in the death of numerous wildlife and domestic animals, and at least 60 patients died because of direct exposure to high concentrations of MC in a haemodialysis unit. LC-MS/MS methods play an important role in the characterization of MC by providing structural (primary amino acid sequence) information that permits precise identification of these toxins. Eleven strains of *Microcystis sp.* (maintained at the Brazilian Cyanobacteria Collection) were cultivated with BG-11 medium in a photoperiod of 12:12 h (light:dark). Samples were collected in the exponential growth phase and the identification of four toxins were carried out from the strains of *Microcystis*: MC-LR, MC-RR, MC-YR and MC-LA MCs were separated and purified by reverse phase high performance liquid chromatography (RP-HPLC) and their structures were elucidated using ESI-MS/MS in combination with LC/MS.

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