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[\[PDF \(955K\)\]](#) [\[References\]](#)**Prediction for temporal changes of cell concentration of the cyanobacterium *Microcystis* in Tenryu River, using the fluid dynamic model of cyanobacteria**[Yukimi KATAGAMI](#)¹⁾, [Keisuke NAKAYAMA](#)²⁾, [Atsushi YOKOYAMA](#)³⁾, [Takamitsu HOMMA](#)⁴⁾ and [Ho-dong PARK](#)¹⁾

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Abstract

A toxic cyanobacterial bloom caused by *Microcystis* occurs from spring to autumn in Lake Suwa, a eutrophic lake in Japan. The distribution of *Microcystis* cells in the Tenryu River flowing from Lake Suwa was investigated, and those cells were observed in the river during the investigation period. Since temporal changes in the flow rate of *Microcystis* were to be expected, we developed an advection-diffusion model “the fluid dynamic model of cyanobacteria” to analyze the temporal changes in *Microcystis* cell concentrations in the river; this model can be used to predict those changes downstream of the river and produce risk assessments of cyanobacterial toxin.

Key Words: [Fluid dynamic model of cyanobacteria](#), [Temporal changes in *Microcystis* cell concentration](#), [range of the shift](#), [determination of initial concentration of *Microcystis*](#)

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