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**The relationships between the standing crop  
of genus *Microcystis*, microcystin and  
environmental factors in the Nakdong River**

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The standing crop of genus *Microcystis* and microcystins concentration were investigated at stations of the lower reaches in the Nakdong River. The *Microcystis* were observed from May to October, and the cell density was higher at St. Seonam than the other stations with maximum of 250,000 cells/ml forming scum at the surface water. There were significant relationships between the standing crop of *Microcystis* and nitrate nitrogen, total phosphorus concentration and pH. Presumably these parameters were critical in the succession to *Microcystis* dominated phytoplankton community in the summer period in the river. However, ammonium nitrogen, phosphate phosphorus concentration and N/P ratio were not critical factors. The *Microcystis* bloom was notable at the surface temperature higher than 25°C. Microcystins were detected from May to November in the algal materials from the river with significant yearly fluctuation. The 84.2% of algal materials with *Microcystis* exhibited toxicity of microcystin with the maximum of 1711.8 µg/g dry wt. The microcystin concentration in the algal materials were significantly related to the standing crop of *Microcystis*, which was the primary determinant factor in the toxicity of algal materials. The concentrations were also significantly related to pH of the water column in the positive pattern.

**Key words** : *Microcystis*, microcystin, environmental factors, Nakdong River