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## A study on the algal growth-related water quality of the Dongbok lake

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We studied algal growth-related water quality of the Dongbok lake which is the drinking water reservoir for the Gwangju municipality. *Peridinium cinctum* and several diatomic algal species frequently caused water bloom throughout the lake from early spring to late autumn. With the heaviest predominance of *Peridinium cinctum* in May 2003, COD was 13.7 mg/l in the surface layer. Highly turbid surface water with 46.8 mg/l of SS was also caused by *Peridinium* bloom. *Peridinium* bloom decisively eliminated cyanobacterial growth in the lake, otherwise cyanobacterial bloom resulted. Dense algal layer was confined in the upper several meters of the water column above the thermocline, which gives relatively algae-free water in deeper layer suitable for drinking source water supply. Upon collapse of thermocline, water quality of the surface layer was improved while deeper layer was deteriorated in terms of water quality. This paper deals with some details of water quality changes with algal growth in the Dongbok lake past two years.

Key words: Water quality, Algae, Bloom, *Peridinium*, Sangsa lake