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Geosmin concentration and its relation to environmental factors in Daechung Reservoir

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Water quality including geosmin concentration was investigated weekly from spring to autumn in 1999 in the Daechung Reservoir. Geosmin was analyzed by a purge and trap-gas chromatographic technique and detected only 5 times out of 25 samples, especially when cyanobacteria occupied over 60% among algae. Geosmin concentration was highly correlated with phycocyanin concentration, cyanobacterial cell number, and *Anabaena spiroides* cell number. The detected geosmin was purely cellular form without dissolved form. *A. spiroides*, a dominant cyanobacterium, seemed to be a major producer of geosmin. The production of geosmin could be predicted beforehand by the cell number of *A. spiroides* over 10,000 cells/ml and cyanobacterial percentage over 60%.