

**B510** The distributions of nutrients and chlorophyll a concentration in the estuarine reservoir of the Kum River

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The spatial and temporal variations of water quality was surveyed in the new-born estuarine reservoir of the Kum River from September 1994 to May 1995 on the monthly basis. Secchi disc depth(SD), chlorophyll a concentration, and nutrients concentration were measured along the mainstream of the reservoir from the dam at the river mouth to the plunging point of the Kum River. After three months of impoundment there was no trace of salt water. Trophic states were in range of eutrophic, from 61 to 79. SD was maintained smaller than 1 m during the study. TP showed large fluctuation from 70 to 413  $\mu\text{g}/\ell$ , while TN concentration showed smaller variation from 1.3 to 3.3  $\text{mg}/\ell$ . TN/TP weight ratio varied from 5 to 47. Chl. a concentration was high in dry season ranging 30 to 90  $\text{mg}/\text{m}^3$ , and low after heavy rain due to washout effect. Of the three sites within the reservoir chl. a was highest at the upstream site and lowest at the dam site. Vertical profile of water quality showed homogeneous distribution, implying that turbulence is high enough to disturb thermal stratification.

**B511** Unialgal Culture of Natural Freshwater Algae Isolated by Micromanipulator in the Naktong River

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Some important and dominant species were isolated from natural phytoplankton of the Naktong River. Algal cells were isolated using the micropipette technique, in which pressure of attached Narishige micromanipulator system ranged from -0.04 to 7.0 psi and algal cells were washed five-times with autoclaved distilled waters. Micro-needles size were 5~150 $\mu\text{m}$  diameter and 130mm length. Algal cultures were made in Chu no. 10, Bristol, and MA media. Nine species were isolated from the Naktong River Estuary; 4 diatoms (*Cyclotella atomus*, *Melosira* sp., *Stephanodiscus hantzschii* f. *tenuis*), 4 green algae (*Chlamydomonas* sp., *Golenkinia radiata*, *Pediastrum* sp., *Scenedesmus quadricauda*), and 1 blue-green algae (*Microcystis aeruginosa*). We will study on the algal ecophysiology such as nutrient kinetics from this time forward in a laboratory.