

6.5Ma record of photosynthetic pigments in Lake Baikal BDP98.

Fumiko Nara[1], Yuko Soma[2], Nobuyasu Itoh[3], Yukinori Tani[4], Mituyuki Soma[2], Genki Inoue Matsumoto[5], Atsushi Tanaka[6], Takayoshi Kawai[7]

[1] Inst. for Environ.

Univ. of SHIZUOKA, [2] Inst. Environ. Sci., Univ. Shizuoka, [3] Inst.Environ.Sci., Univ.of Shizuoka, [4] Inst.Environ.Sci.,Univ.of Shizuoka, [5] Sch. Social Info. Studies, Otsuma Women's Univ., [6] Natl Inst. Environ. Stud., [7] NIES

Steryl Chlorin Esters (SCEs) are formed through grazing of phytoplankton by zooplankton. SCEs were analyzed through the 0-300m section of the 600m long BDP98 sediment core from Lake Baikal and detected down to the depth of 230m (corresponding to 5.5Ma). This indicates that SCEs are stable in the sediment and can be useful biomarker for phytoplankton in the lake paleoenvironment. The fluctuation of SCEs was corresponding to that of TOC but not always to that of biogenic silica (BGS). SCEs would reflect whole phytoplankton population while BGS represents diatom only. So, this disagreement between SCEs and BGS indicates that phytoplankton than diatoms (for example green algae or dinoflagellates) has been also important in the past Lake Baikal. Changes in the phytoplankton composition was reflected in the pattern of SCEs in HPLC chromatograms.