Basic study on rapid ditection of plankton communities in Lakes

Abstract:

The possibility of the rapid ditection of the phytoplankton communitises with flow cytometry was examined. The measurement sample was the water in Lake Biwa and Kasumigaura. Detection of the phytoplankton communities with flow cytometry was possible by the scattering and fluorescence characteristic of each phytoplanktons. Phytoplanktons classification and their ounting in the Lake Biwa were possible using the relationship between yellow and red fluorescence intensity. Those in the lake Kasumigaura were possible using relationship between forward scattering intensity and red fluorescence intensity. The flow cytometry is effective for the detection of the picophytoplankton in lakes. The picophytoplankton of Lake Biwa was increased in the upper layer in the summertime.

Key words: Phytoplankton communities, Flow cytometry, Lake Biwa and Kasumigaura