

Evaluation of water reservoir ecological state using rbcL protein of phytoplanktons

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Abstract

© 2016, International Journal of Pharmacy and Technology. All rights reserved. As is known phytoplankton [1], as well as zooplankton and zoobenthos [2,3] are actively used in bioindication to assess the ecological status of water bodies. The analysis of 85 rbcL proteins from indicator phytoplankton organisms presented in Sladeczek V. (1973) list showed the presence of 45 unique sites of amino acid sequences in the chloroplast gene rbcL for 21 species of phytoplankton organisms. Unique variable sites are located on the surface of rbcL protein in phytoplankton organisms and can be recognized specifically by antibodies in a single sample of water using EIA method. The studies on the use of rbcL protein as a marker for the identification of phytoplankton in conjunction with the identification by marker protein CO1 from zooplankton and zoobenthos in water sample provide a more accurate assessment of water body ecological status.

Keywords

Indicator species, Phytoplankton, rbcL protein