

Diatom 11: 65-71 (英文)

墨田廸彰・渡辺仁治：富山県黒部川扇状地湧水群の付着珪藻群集

Michiaki Sumita and Toshiharu Watanabe : Attached diatom assemblages in springs in the alluvial fan of the River Kurobe, Toyama Prefecture

Abstract

The collection of attached diatom assemblages of 14 samples and the measurement of some physicochemical variables of spring water in each sampling site were done on 4 July 1994 in 12 springs in the Ikuji area and on 2 July 1995 in a spring in Sugisawa. In this study the following results were obtained.

1. The distribution of pH values ranged from 6.2 to 7.3 and EC values ranged from $79\mu\text{s} \cdot \text{cm}^{-1}$ to $190\mu\text{s} \cdot \text{cm}^{-1}$.
2. DAIPo values ranged from 61 to 79, indicating that the degree of water pollution at all sites corresponded to the oligosaprobic level in the former saprobic system. None of the sampling sites in the present survey showed any DAIPo value higher than 85 (xenosaprobic) which is the lowest DAIPo value for the mountain springs.

This assessment indicates that springs in the coastal area of the alluvial fan of the R. Kurobe are slightly affected by organic pollutants.

3. The range of DAIPo values from 61 to 79 obtained in this survey of springs was smaller than that from 54 to 91 calculated using the samples collected from the rivers near the springs.

This result suggests that the penetration of surface water into underground affects the water quality of springs.

Key index words

spring, attached diatom assemblage, DAIPo (Diatom Assemblage Index to organic water pollution), first grade species