

Diatom 20: 199-206 (英文)

小島貞男：珪藻と水道

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Abstract

The relationships between diatoms and water supplies are discussed. 1) Diatoms give sever damages to water works : clogging both slow and rapid sand filters, mechanisms of clogging are different between them, though. Clogging of slow sand filter is caused by accumulation of diatom on the surface of sand layer, while that of rapid sand filter is caused chiefly by difficulty of coagulation-sedimentation of special diatom, e.g. *Synedra acus*. 2) Diatoms have, on the other hand, very useful aspect to water works, e.g. diatom can be used as a tracer of water current in lake and reservoir, and as indicator of leakage of impounded or supplied water, too. Several examples of both cases are shown. 3) Three types are distinguished in precipitation patterns of dead or weakened diatom. And the mechanisms and application to water works are studied while precipitation rates of two species are measured in natural condition.

Key index words : clogging, diatom, indicator, precipitation, tracer of water current, water supply