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# ALGAE REMOVAL FROM EUTROPHIC WATERS BY DISSOLVED-AIR FLOTATION

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## ABSTRACT

The dissolved air flotation (DAF) experiments involving pre-oxidation and alum coagulation were carried out with a bench-scale unit under laboratory conditions for chosen green algae (*Chlorophyceae*) removal from water. Destabilization of particles was necessary to provide favourable conditions for microagglomerate attachment to the collectors (air bubbles). The parameters of agglomeration included pre-oxidant ($ClO_2$) and coagulant (alum) doses, pH, as well as duration and rate of mixing during the course of flocculation. The parameters of separation comprised recycle ratio and saturation pressure. DAF provided adequate opportunities for collisions between destabilized particles and air bubbles, thus reducing the need of long flocculation periods. DAF preceded by pre-oxidation and alum coagulation produced clarified water with low algal counts at a reasionable limited coagulation dosage.