

**POS7. IDENTIFICATION OF SOME MICROALGAE SPECIES WHICH
CAN DEVELOP TASTES AND ODOURS IN DRINKING WATER
TREATMENT PLANTS**

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Abstract

The microorganisms responsible for secretion of organic compounds in very small concentrations (ng/l) causing tastes and odours in potable water are mainly actinomycetes and blue-green algae (cyanobacteria).

The most typical tastes and odours-causing algae identified on the surface of chemical sludge (aluminium hydroxide flocs) separated after coagulation-flocculation-settling treatment of surface water samples were:

- *Anabaena* sp., *Aphanizomenon flos-aqua*, *Oscillatoria* sp. (Cyanophyceae class);
- *Pediastrum simplex*, *Scenedesmus* sp. (Chlorophyceae class);
- *Cyclotella* sp. (Mediophyceae class) and *Fragillaria* sp. (Bacillariophyceae class).

The associated odors with the above-mentioned microalgae can be various and different from herbal, earthy, spicy to geranium. The microalgae species were identified by microscopy investigations performed by using Leica DM6 microscope (Leica Microsystems CMS GmbH, Germany).

Depending on the nature of the compounds creating tastes and odours, different treatment processes can be used for their elimination, in the most cases only by multistage treatment based on oxidation (O₃, H₂O₂/O₃, O₃/UV, H₂O₂/UV) followed by filtration/flotation and GAC adsorption.

Keywords: *microalgae community, odour /taste, surface water*