



APPLICATION OF SEVERAL ALUMINIUM PREHYDROLYSED COAGULANTS IN SURFACE WATER TREATMENT FOR POTABILIZATION

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Abstract

A prehydrolyzed aluminium chloride (PAC), commercial product selected from a previously studied series, and the electrochemically obtained PAC (E-PAC) were tested as coagulants, comparatively with the classical aluminium sulfate (alum). A new method for producing E-PAC has been applied. The level of turbidity, the amount of total organic carbon, the UV-254 absorbance and the residual aluminium were evaluated, for determining the efficiency of the coagulation process in all situations of using PAC, E-PAC and alum as coagulants. The aim of the paper was to improve coagulation - flocculation process in laboratory conditions, as first step for later use in the surface water treatment plant for potable utility of Timisoara town (Romania), which has Bega River as raw water source. It can be estimated that the E-PAC offered the better alternative for practical use in drinking water processing.

Key words: coagulation, drinking water treatment, electrochemical polyaluminiumchloride (E-PAC), electrochemical reactor,

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