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Mixed coagulants producing methods

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Mixed coagulants has been more noticed recent years. It contains base aluminium chloride, aluminium and iron sulphate. Using mixed coagulants allows to importantly ampliate optimal pH value region, due to hydrolysis product difference and physico-chemical properties of last one. Flocculus precipitate acceleration what with coagulant temperature changing ascribe more dansely particles pressing.

All mixed coagulants in common case are subdivide on tree groups: (1) mixed coagulants based on aluminiam suphate (AS), chloride and sulphuric acid iron; (2) mixed coagulants based on aluminium gydroxichloride (GOCHA) and aluminiam suphate (AS); (3) mixed coagulants based on GOCHA and AS, containing another compound (except aluminium) or polyvalent ions.

Fabrication method of lastone variate from simple mixing of reagents to produce different types of row materials, that depend on chosen mixed coagulant. For example, mixed coagulant based on AS and iron saline can be produced by sulphuric acid processing from high ferric bauxite or mixing aluminium sulphate with iron saline (iron chloride or sulphate). Mixed coagulants based on GOCHA and AS (with common formula $Al_m(OH)_nCl_{3m-n-2k}(SO_4)_k$, where k, m and n are plus digits, $3m>n+2k$, and $k/m=0.01-0.3$) can be produced mixing GOCHA and AS solutions in determinate conditions; interaction aluminium chloride and aluminate solutions in present SO_4^{2-} ions. Mixed coagulants based on GOCHA and AS whit addition polyvalent cation, for example, iron with common formula $Al_nFe_{(0.1-0.3)n}(OH)_{3n-x-y}Cl_x(SO_4)_y$ can be produsedused using mixing GOCHA, AS and iron salines solutions, using mixture active aluminium hydroxide and sulphuric-saline acids synthesis in present iron cations. Technology producing of tree chops mixed coagulants was developed in our laboratory.

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