

Title (en)
TREATMENT METHOD OF WATER CONTAINING HUMIC SUBSTANCES AND ARSENIC FOR THE PRODUCTION OF DRINKING WATER USING INORGANIC POLYMERS OF ALUMINIUM AND SILICA AS COAGULANTS

Title (de)
BEHANDLUNGSVERFAHREN FÜR HUMINSTOFFE UND ARSEN ENTHALTENDES WASSER ZUR ERZEUGUNG VON TRINKWASSER UNTER VERWENDUNG VON ANORGANISCHEN POLYMEREN VON ALUMINIUM UND SILICIUMDIOXID ALS KOAGULANTIEN

Title (fr)
PROCEDE DE TRAITEMENT D'EAU CONTENANT DES SUBSTANCES HUMIQUES ET DE L'ARSENIC POUR LA PRODUCTION D'EAU POTABLE AU MOYEN DE POLYMERES INORGANIQUES D'ALUMINIUM ET DE SILICE EN TANT QUE COAGULANTS

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Application
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Abstract (en)
[origin: WO2007019588A1] The invention relates to the removal of humic matter and arsenic from natural waters with inorganic polymers of aluminum and silica in the field of raw waters with extreme humic mater and arsenic content and outstanding negative purification conditions such as high ionic strength and distinctly negative temperature conditions. With the innovated, enhanced, purification technology defined by this procedure removal of humic matter and arsenic such that even in the phase of coagulation and flock separation give drinking water quality standard is achieved, under conditions of extremely high humic matter content like the raw water of Zrenjanin type with KMnO₄ consumption over 50 mg/dm³ and total As over 0.100 mg/dm³. Presence of high content of different arsenic forms in raw water, solely or together with high content of humic matter demands their removal by the most suitable techno economic and ecologic way. By application of innovative technology the best conditions for simultaneous removal of both pollution types from raw water have been produced. The method itself consists in optimization of purification conditions: by neutralization of the charge of humic molecules, provision of optimal pH and inorganic polymer doses and their ratios with appropriate energetic conditions for flock formation, and than application of different separation processes, whether classical separation schemes (sedimentation or flotation by sand filtration) or membrane separation processes.

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