

Publications



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Survey and Control of Synthetic Organics in Texas Water Supplies

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Four Texas water supplies (Lake Somerville, Lake Livingston, Neches River, and Sabine River) were surveyed to determine their tendency to form trihalomethanes when chlorinated. The ability of conventional and innovative treatment processes to reduce the level of trihalomethane formation potential (THMFP) in these waters was also investigated. Conventional alum coagulation was studied in a series of jar tests in which the effect of pH and alum dose on removal of THMFP, ultraviolet absorbance (UVA), total organic carbon (TOC), and visible absorbance (VA) was determined. Removal patterns for the more

easily measured parameters (UVA, TOC, and VA) were analyzed to determine if they could be used to predict the removal patterns for THMFP. Visible absorbance was used as a surrogate for turbidity. Modification of conventional alum coagulation by addition of acid or base for pH control or by addition of secondary coagulants was studied. A medium molecular weight cationic polymer and activated silica were used in conjunction with alum and as sole coagulants. An innovative treatment process for removal of THMFP was also investigated. In these studies, batch and continuous flow experiments were conducted to evaluate the potential of activated alumina adsorption to remove organics from drinking water.

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