

Simultaneous Removal of Chlorinated Aromatic Hydrocarbons, Nitrate, and Chromate using Micellar-Enhanced Ultrafiltration

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The feasibility of micellar-enhanced ultrafiltration for the mixed waste consisted of chlorinated aromatic hydrocarbons, nitrate, and chromate was investigated using a cationic surfactant. The co-presence of nitrate and chromate did not affect significantly the removal of chlorobenzenes, and the co-presence of chlorobenzenes did not affect the removal of nitrate and chromate because chlorobenzenes were solubilized at the hydrophobic interior of the micelles by hydrophobic interaction, but nitrate and chromate were bound to the outer shell by electrostatic interaction. Micellar-enhanced ultrafiltration can be applied to treat the mixed wastes.