

## Characteristics of removal of EDTA-heavy metal complex using a cationic surfactant by micellar enhanced ultrafiltration

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Micellar enhanced ultrafiltration (MEUF) has been introduced to the remediation of the wastewater or groundwater pollution. In this study, the application of MEUF has been broadened into the removal of chelating agent-heavy metal complex. The major target heavy metal was cadmium and the model chelating agent was EDTA. And CPC was used as a cationic surfactant. In addition to the study of cadmium, this study was expanded to the other frequently found heavy metals in the wastewater, zinc and lead. When the initial ratio of EDTA, cadmium, and CPC was 1 mM, 1 mM, and 30 mM, the removal efficiency reached over 97% at pH 7. With other supportive experiments, pH condition and initial EDTA concentration heavily influenced the removal efficiency of the heavy metal complexed with EDTA.