

Pacifichem Selected Abstracts

Saturday, Dec. 17 PM - Poster Presentations				
Presentation Time/ Session Start Time	Location	Prog. #/Type	Authors Institutions	Abstract Title Session #/Title
Saturday, Dec. 17, 4:00 PM - 4:00 PM/ 4:00 PM	Hilton Hawaiian Village - Rooftop Garden	261 General Poster	<u>M.Sada</u> ¹ ; H.Katsumata ¹ ; S.Kaneco ¹ ; T.Suzuki ² ; K.Ohta ¹ ; Y.Yobiko ³ 1. Department of Chemistry for Materials, Mie University, Tsu, Mie, Japan; 2. Environmental Preservation Center, Mie University, Tsu, Mie, Japan; 3. Environmental Chemistry Group, Technology Research Institute of Osaka Prefecture, Izumi, Osaka, Japan	Removal of humic substances in water by adsorption and degradation 460 Environmental and Green Chemistry General Posters [1S]

Pacifichem Selected Abstracts - Selected Abstracts

Removal of humic substances in water by adsorption and degradation

M.Sada¹; H.Katsumata¹; S.Kaneco¹; T.Suzuki²; K.Ohta¹; Y.Yobiko³

1. Department of Chemistry for Materials, Mie University, Tsu, Mie, Japan; 2. Environmental Preservation Center, Mie University, Tsu, Mie, Japan; 3. Environmental Chemistry Group, Technology Research Institute of Osaka Prefecture, Izumi, Osaka, Japan

Program Number: 261

Presentation Time: Saturday, Dec. 17, 4:00 PM - 4:00 PM

Location: Hilton Hawaiian Village - Rooftop Garden

Humic and fulvic acids are natural organic polyelectrolytes that comprise the greatest proportion of naturally-occurring dissolved organic matter in aqueous systems. They are not well-defined substances, but can generally be subdivided into three fractions, namely: humin, which represents components insoluble in aqueous solutions at all pH values, humic acids, which are soluble in alkaline to weakly acidic solutions, but deposit at or below pH 2.0 and fulvic acids, which are soluble in aqueous solutions at all pH values.

Humic materials may be specifically targeted for removal from potable water supplies because they can adversely affect appearance and taste and they can react with chlorine to form potentially carcinogenic chlorinated organic compounds. Therefore, the adsorption and degradation of humic substances have been widely investigated in order to optimize their removal from solution. In the present study, natural organic polyelectrolytes (humic and fulvic acids) were removed by adsorption onto minerals and degradation using advanced oxidation processes. Many factors, such as pH value, initial concentration of reagents and reaction temperature, affected on the degradation were evaluated. In addition, the mechanism of the adsorption and degradation is discussed.

Citation: M.Sada, H.Katsumata, S.Kaneco, T.Suzuki, K.Ohta, Y.Yobiko. Removal of humic substances in water by adsorption and degradation Program No. 261. *2005 Abstract Viewer*. The International Chemical Congress of Pacific Basin Societies

Pacificchem Selected Abstracts - Author Index

Kaneco,S. 261
Katsumata,H. 261
Ohta,K. 261
Sada,M. 261
Suzuki,T. 261
Yobiko,Y. 261