

# Influence of nonionic surfactant compound on coupled transport of copper (II) through a liquid membrane

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The influence of a nonionic surfactant compound (sorbitan monooleate) on the coupled transport of Cu(II) ions in a hollow fiber-type solid supported liquid membrane extractor was studied. The acid compound 5-nonylsalicylaldoxime was used as carrier extractant. The experimental results indicate that the surfactant presents a remarkable interfacial activity, higher than those shown by the carrier extractant which would adsorb at the interface too. From the experimental results it was calculated for the surfactant the interfacial area occupied by mol, the adsorption equilibrium constant and their critical micelle concentration. Results of extraction equilibrium experiments indicate that Span-80 itself did not extract copper and that Cu(II) extraction is enhanced as the acidity of feed aqueous solution decreases. It was found that the surfactant accelerates the permeability of metal in runs carried out using a higher concentration of Span-80 and when a pH value of 2.5 was adjusted for feed