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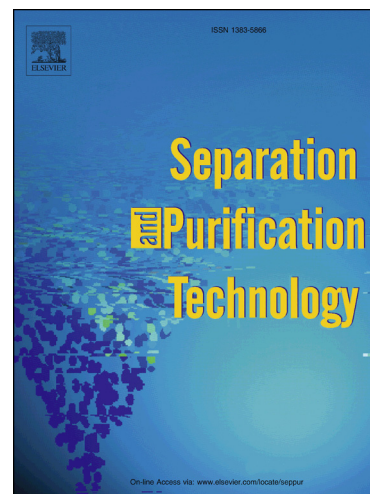
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# Modified floc-flotation in fine sericite flotation using polymethylhydrosiloxane

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## Abstract

This study exploited polymethylhydrosiloxane (PMHS), a heteropolar silane coupling agent, as a new extender oil in the floc-flotation of fine sericite using coconut oil amine (COA) as collector to produce a concentrate required by the cosmetic industry. In parallel, kerosene, a non-polar oil, as the traditional extender oil was examined for a comparison. By assessing true flotation and entrainment in the flotation of fine sericite sample, coupled with the froth stability measurement, the advantages of PMHS over kerosene in fine sericite flotation were examined. It was found that PMHS was more effective extender oil than kerosene in generating larger sericite flocs while producing a drier froth with less mechanical gangue entrainment. As a result, both sericite grade and recovery were improved significantly with the new extender oil. This study also found that PMHS anchored on sericite surface directly

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