

RINGKASAN

Pengaruh penambahan larutan senyawa pengompleks, *ethylenediamine-tetraacetic acid* (EDTA) dan *diethylenetriaminepentaacetic acid* (DTPA), pada fasa umpan telah dipelajari pada pemisahan selektif campuran ion logam berat (Cu, Ni, dan Zn) dengan teknik Membran Cair Berpendukung (SLM) menggunakan membran berpendukung *politetrafluoroetilen* (PTFE) yang mengandung campuran *tributyl phosphate* (TBP) dan *di-2-ethylhexyl phosphoric acid* (D2EHPA) dengan perbandingan konsentrasi 1 : 4.

Penambahan EDTA dengan konsentrasi 1×10^{-4} M dan DTPA dengan konsentrasi $2,5 \times 10^{-5}$ M mengakibatkan selektivitas pemisahan logam Zn meningkat. Kenaikan persen transpor logam Zn dan penurunan persen transpor logam Cu dan Ni menunjukkan kenaikan selektivitas pemisahan logam Zn. Selektivitas yang didapat dari penambahan DTPA di dalam fasa umpan lebih baik daripada penambahan EDTA di fasa umpan.



SUMMARY

The effect of a water soluble chelating agent addition, ethylenediamine-tetraacetic acid (EDTA) and diethylenetriaminepentaacetic acid (DTPA), to the feed phase was studied on the selective permeation of heavy metal ion mixture (Cu, Ni, and Zn) through a supported liquid membrane (SLM) using Polytetrafluoroetilen (PTFE) as the supported membrane containing tributyl phosphate (TBP) and di-2-ethylhexyl phosphoric acid (D2EHPA) with comparison of concentration 1 : 4.

Addition of EDTA with concentration 1×10^{-4} M and of DTPA with concentration 2.5×10^{-5} M caused the increasing of Zn metal separation selectivity. The increase of percentage of Zn metal transport and decrease of percentage of Cu and Ni metal transport showed the increasing of Zn metal permeation selectivity. The selectivity of DTPA presence in the feed phase is better than the presence of EDTA in the feed phase.

