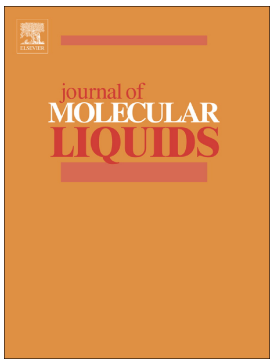

Synergistic extraction of some univalent cations into phenyltrifluoromethyl sulfone by using cesium dicarbollylcobaltate and calix[4]arene-bis(t-octylbenzo-18-crown-6)

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Short Communication

Synergistic extraction of some univalent cations into phenyltrifluoromethyl sulfone by using cesium dicarbollylcobaltate and calix[4]arene-bis(*t*-octylbenzo-18-crown-6)

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ABSTRACT

From extraction experiments and γ-activity measurements, the exchange extraction constants corresponding to the general equilibrium M^+ (aq) + **1**·Cs^+(org) $\rightleftarrows$ **1**·M^+ (org) + Cs^+ (aq) taking place in the two–phase water–phenyltrifluoromethyl sulfone (abbrev. FS-13) system (M^+= Ag^+, Tl^+, K^+, Rb^+; **1** = calix[4]arene-bis(*t*-octylbenzo-18-crown-6); aq = aqueous phase, org = FS-13 phase) were determined. Further, the stability constants of the **1**·M^+ complexes in FS-13 saturated with water were calculated; they were found to increase in the series of K^+ < Rb^+ < Ag^+ < Tl^+.

Keywords:
Univalent cations
Calix[4]arene-bis(*t*-octylbenzo-18-crown-6)
Complexation
Extraction and stability constants
Water– phenyltrifluoromethyl sulfone system

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