

Cyclic square wave polarographic studies of tin (IV) in the presence of picolinic acid

ABSTRACT

The irreversible reaction of stannic-tin, Sn(IV), in noncomplexing supporting electrolyte was found to be reversible in the presence of picolinic acid (PA). Experimental evidences obtained from Tast polarography, electrocapillarity studies and cyclic square wave polarography indicated that Sn(II)-PA complex was adsorbable at the electrode surface but not Sn(IV)-PA complex. The adsorption effect has caused some degree of current enhancement. The enhancement and reversibility of the electrode reaction was dependence on pH, electrolyte, sweep rate, initial potential and presence of interference such as triton X-100.

Keyword: Cyclic square wave polarography; Sn(IV); Sn(II); Picolinic acid; Adsorption