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Electrochemical Behaviour of Thymolphthalein

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Abstract: The polarographic and voltammetric behaviour of thymolphthalein in ethanol-water (1/5 v/v) was studied using various electrochemical techniques. The reduction of thymolphthalein on a mercury drop electrode was investigated. The adsorption effect on the electrode surface was observed. The rate constants for the electron transfer steps were determined by and without taking adsorption into account using the Laviron technique and Nicholson technique respectively. The diffusion coefficients were calculated from the cyclic voltammetric data using the method developed by Garrido. Reversibility for the electrode reaction was investigated and a mechanism for the electrode reaction was proposed.

Key Words: Polarography, voltammetry, thymolphthalein, adsorption, rate constants

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