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Effect of maxima suppressor and supporting electrolyte on polarographic wave of dimethyl sulfoxide and its determination

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The oxidation of the biologically very important dimethyl sulfoxide system has been the subject of investigations. In present study Dimethyl sulfoxide (DMSO) can be oxidized to dimethyl sulfone by anodic electrolysis at a rotating platinum electrode. The polarographic method has been used to study qualitatively the effect of maxima suppressor gelatin, fuchsin, methyl red, thymol blue and supporting electrolyte HCl, CH₃COOH on oxidation wave of DMSO. Polarographic oxidation of DMSO in 0.1 M HCl, 0.1 M CH₃COOH solution using optimum concentration of fuchsin, methyl red, thymol blue as surface active substances is followed to determine the DMSO present in synthetic sample by calibration method. Wave analysis indicate the irreversible nature of the oxidation process which involves oxidation of dimethyl sulfoxide to dimethyl sulfone thereby increasing the oxidation state of sulphur from + 2 to + 4 state.

Biography

Swaroop Rani N Gupta has done Ph.D. in Chemistry from Nagpur University, Maharashtra, India in 1993. She is an Associate Professor in the Department of Chemistry, Brijlal Biyani Science College, Amravati, Maharashtra, India. She has published more than 15 papers in reputed international journals; she has presented papers at Inter National conferences at India, Singapore, London, Dubai, Hong Kong, Mauritius, Tashkent and has been serving as Technical committee member of International Conferences at Singapore, U.K., Dubai, Hong Kong, Mauritius, Korea, Turkey, New Zealand etc. She wants to explore world through great research interest in all aspect of world problem.

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