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## Determination of ionol by voltammetry and coulometric titration

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### Abstract

Procedures were developed for determining ionol by voltammetry and by coulometric titration with electrogenerated chlorine using the amperometric indication of the titration end point. Possible mechanisms of ionol oxidation with electrogenerated chlorine and its electrochemical oxidation at a glassy carbon and a gold electrode were discussed. Procedures were developed for determining ionol in mineral oil in analytical ranges from  $1.0 \times 10^{-4}$  to  $1.0 \times 10^{-2}$  M (RSD = 9%) and from  $3.0 \times 10^{-5}$  to  $4.0 \times 10^{-3}$  M (RSD = 9%) using a glassy carbon and a gold electrode, respectively. The detection limits for ionol at the glassy carbon and gold electrode were  $2.8 \times 10^{-4}$  and  $1.0 \times 10^{-5}$  M, respectively. The detection limit in coulometric titration was 20  $\mu\text{g/mL}$ .

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