

## **Inversion voltammetric determination of molybdenum in steels using catalytic currents of oxidants in the electrodisolution stage**

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### **Abstract**

Catalytic polarographic currents are used extensively for determination of small amounts of molybdenum. The preconcentration of Mo(VI) on stationary mercury microelectrodes (SMME) was investigated, using chemical reactions of oxidants with metallic mercury. In the presence of Mo(VI) ions the reaction of mercury with oxidants such as  $\text{ClO}_3^-$  gives  $\text{Hg}_2\text{MoO}_4$ , which then produces a catalytic current upon cathodic polarization in the usual fashion. To select the optimum conditions for the analysis, the influence of the preconcentration time and the concentration of the components of the solution on the catalytic current was studied. The sensitivity of the method, (magnitude of the analytical signal), depends on pH and is a maximum at a pH between 2.8-3.0. The analytical procedure is described.

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