INVERSION VOLTAMPEROMETRY AT THE Mo DETERMINATION

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At present time Mo has wide used in different fields of science and technics, it’s compounds has used for obtain special alloys and steels having high module of elasticity, firm to corrosion. Mo and it’s compounds also have an important biological and physiological significance. Mo participates in nitrogen, hydrocarbon and grease exchange; in some biochemical processes, stimulates of nucleonic acids and proteins biosynthesis. Lack of Mo in food of man has slowed of the grown of cells and has increased inclination to caries, but it’s high content in blood has increased risk of podagra origin and sclerosis. At the same time Mo is attributed to wide spreaded and potentially dangerous for man elements.

Taking into account the extraordinarily important role of Mo in technics and biology the development of new selective methods of it’s determination by inversion voltamperometry with using of developed in our laboratory solid indicator electrode has a high importance. This problem is a aim of this investigation.

Experiments were carried out on the polyarograph PV-1 with electrode cell and self – register PDA-4 in varibly- current regime carbon- paste and chloride- silver EVL-1M electrodes were used correspondently as indicator and comparison electrodes , and subsidiary electrode was spectrally pure graphite pivot. 0.1M H₃PO₄, HSCN, K₂SO₄, and HNO₃; 0.2M H₂SO₄ and HClO₄ and 0.5M HCl were used as phone electrolytes.

Optimal conditions of Mo determination are: phone 0.1M H₃PO₄; Eₜ=-0.55V, tₜ=90-180 sec, current range 2.0-2.5 mkA. On the voltamperic curve an the potential –0.2V the pick is observed the height of which is proportional to Mo concentration in investigated solution. The trustworthy results also were obtained on phone of 0.2M H₂SO₄ though the sensitivity of it’s determination was lower on two order.

The obtained results are right and reproduced with the relative standart deviation don’t exceed 0.33.