

The method for obtaining active cathode material for low-temperature lithium accumulators by means of cathodic deposition on the basis of stainless steel or aluminum as ballastless deposition from water solution that contains sulfate of ferric, nickel, copper and sodium thiosulfate at pH 4.3-4.7 and temperature 20-25 °C includes obtaining active cathode material as a cobalt-sulfide compact deposition with mass of 1-15 mg/sm² from solution, where cobalt sulfide and sodium sulfide are additionally dissolved with the following ratio of components, g/l: 7-9 CoSO₄; 1-1.5 FeSO₄; 0.3-0.5 CuSO₄; 3-3.5 Na₂S₂O₃; 1-1.5 Na₂S; 0.3-0.5 NiSO₄. The invention provides raising stability of electrolyses process and specific discharge characteristics of obtained metal-sulfide material of lithium accumulators.