Invention relates to chemical industry.

Method for electrochemical production of sulfuric acid, which consists of placing aqueous solution of iron sulfate with excess of sulfuric acid in cathode chamber of electrolyzer, passing an electric current through electrolyzer, which leads to the electrolysis of water, during which oxygen is released in anode region, and hydrogen is released in anode region; protons formed in anode chamber react with components of solution to form sulfuric acid, and protons in cathode region are reduced to hydrogen, which causes a decrease in acidity in cathode chamber and leads to the purification of iron sulfate solution and the concentration of sulfuric acid in anode region. The purification of iron sulfate from excess sulfuric acid takes place in two-chamber electrolyzer under constant monitoring of the acidity in cathode chamber, with solution's acidity reduced to a value within the range of 20-25 mg-eq/dm³. Purified iron sulfate solution is removed from cathode chamber, and fresh iron sulfate solution containing excess of sulfuric acid is introduced into chamber; the process continues until the concentration of sulfuric acid in anode region reaches 35-40 wt. %.

Technical result: reduction in time and electricity consumption during the production of sulfuric acid.