

Abstract

By electrolytes from lignite slurry in 0.5 M NaOH or graphite electrodes were produced humic acids (HA), H₂ production and other traces of gases. The amount of humic acids precipitates with the potential angle current, maximum current at E = 8V and increased more with the increase of the electrode potential. The reaction rates increased with temperature and active temperature sensors, both at limiting currents and total reaction rates. This shows that the complex reaction pathway is more than reaction. The current efficiencies for H₂ produced by range > 80% which measured at brown coal at E = 8V, graphite electrodes for 2 h. Although, a graphite anode itself is electrochemically oxidized when used in this process, the reaction rates are 2-3 times higher with graphite than Pt. The aromatic organic compounds can be extracted from the remaining reacted carbon in suitable solvents. These signifiers are synthetic organic compounds with auxiliary electrolyte and precipitation by neutralization. Samples (products) have been characterized by elemental analysis and FTIR and UV-VIS spectroscopy. These are available as datasheets, with the influence of electrodes potentials for gas production rate and composition of organic products. For the process leading to the observed products, different reaction pathways are assumed.