

Title (en)

Electrochemical process for reducing oxalic acid to glyoxylic acid.

Title (de)

Elektrochemisches Verfahren zur Reduktion von Oxalsäure zu Glyoxylsäure

Title (fr)

Procédé électrochimique de réduction d'acide oxalique en acide glyoxylique

Publication

EP 0578946 B1 19960214 (DE)

Application

EP 93108108 A 19930518

Priority

DE 4217338 A 19920526

Abstract (en)

[origin: EP0578946A2] The present invention describes a process for preparing glyoxylic acid by electrochemical reduction of oxalic acid in aqueous solution in divided or undivided electrolytic cells, characterized in that the cathode comprises from 50 to 99.999% by weight of lead and the aqueous electrolysis solution in the undivided cells or in the cathode space of the divided cells additionally contains at least one salt of metals having a hydrogen overvoltage (overpotential) of at least 0.25 V, based on a current density of 2500 A/m², and at least one mineral acid or organic acid. The process of the invention has the advantage that a highly pure, expensive lead cathode is not necessary and industrially available lead-containing materials can be used, for example alloys which, besides lead, contain at least one of the metals V, Sb, Ca, Sn, Ag, Ni, As, Cd and Cu. Periodic rinsing with nitric acid is not necessary.

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