

Reactive extraction of free organic acids from ammonium salts thereof

Abstract

5 The invention relates to a method for converting ammonium salts of organic acids into the respective free organic acids, wherein an aqueous solution of the ammonium salt is brought into contact with an organic extraction agent, and the salt splitting occurs at temperatures and pressures at which the aqueous solution and the extraction agent are in the liquid state, wherein a stripping medium or carrier gas is introduced in
10 order to remove NH_3 from the aqueous solution, and at least one part of the free organic acid formed passes into the organic extraction agent. Thus the invention described here provides an improved method for releasing an organic acid, preferably a carboxylic acid, sulphonic acid, or phosphonic acid, especially an alpha-hydroxycarboxylic acid or beta-hydroxycarboxylic acid, from the ammonium salt thereof by releasing and removing ammonia and at the same time extracting the released acid from the aqueous phase using a
15 suitable extraction agent. Said method corresponds to a reactive extraction. The reactive extraction of an organic acid from the aqueous ammonium salt solution thereof can be significantly improved by using a stripping medium or carrier gas such as nitrogen, air, steam, or inert gases such as argon. The released ammonia is removed from the aqueous solution by the continuous gas flow and can be fed back into a production process. The free acid can be obtained from the extraction agent by a method such a distillation,
20 rectification, crystallization, re-extraction, chromatography, adsorption, or by a membrane method.