ABSTRACT

Process for the separation of Li from oxides of one or more of Co and Ni contained in a feed, comprising the steps of: contacting, in aqueous medium, the feed with a quantity of sulfidizing agent, sufficient to convert a major part of the Co and/or Ni to sulfides, and a quantity of mineral acid sufficient to reach a pH of 1 to 5, thereby forming an aqueous slurry containing solid Co and/or Ni sulfides, and a solution containing Li; and, separating the solids from the solution, thereby obtaining solids containing Co and/or Ni sulfides, and a solution containing at least 70% of the Li.

This process allows to convert Co and Ni to solid sulfides and at the same time to efficiently separate them from soluble compounds such as Li, Mn and other impurities.