

ABSTRACT

The present invention relates to a process for producing a liquid NPK fertiliser, which is characterised in that the educts K_2CO_3 or $KHCO_3$, NH_4HCO_3 and H_3PO_4 are reacted in aqueous solution to form potassium and ammonium phosphates, in particular to form K_3PO_4 and $(NH_4)_3PO_4$, wherein the reaction takes place in a plurality of steps and comprises at least one exothermic reaction and at least one endothermic reaction, and wherein the temperature of the reaction is controlled by regulating the added amount and rate of addition of the respective educts in the various steps such that the reaction mixture is kept in a desired temperature range, preferably in a temperature range of 5°C to 50°C, throughout the entire reaction without any external cooling or heating devices being required to control the temperature of the reaction. In a more specific embodiment, the process according to the invention is characterised in that the at least one exothermic reaction comprises the reaction of K_2CO_3 with H_2O to form $KHCO_3$ and KOH and/or the reaction of $KHCO_3$ with H_3PO_4 to form K_3PO_4 , CO_2 and H_2O , and the at least one endothermic reaction comprises the reaction of NH_4HCO_3 with H_3PO_4 to form $(NH_4)_3PO_4$, CO_2 and H_2O .

<No suitable figure>