Fertilizer Research 24: 63–66, 1990.

Optimising P_2O_5 availability for fertilizer use, by direct treatment of apatite with hydrochloric or nitric acids

K. Tennakone[1,2]*, U.S. Ketipearachchi[1] & U. Weragama[1]
[1] *Institute of Fundamental Studies, Hantana, Kandy, Sri Lanka*
[2] *Department of Physics, University of Ruhuna, Matara, Sri Lanka*

Key words: Apatite, phosphate fertilizers, hydrochloric acid, nitric acid

Abstract

Hydrochloric and nitric acid treated apatite is not directly used as a fertilizer because of the hygroscopic character of the products. Another problem arises from the volatility of these acids and that acidulated product undergo reversions during drying with loss of the acid. We have found that apatite beneficiated with hydrochloric and nitric acids dried at an optimum temperature ~120°C has high available phosphorous. The products can be stored in the solid form in sealed polythene bags.