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ROCK PHOSPHATE OF KAKUL AREA OF HAZARA DISTRICT

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ABSTRACT

Phosphorite deposits are present at Kakul area in Hazara District. Phosphorite of this locality is hard and difficult to grind. The chemical analysis and various techniques employed show that P_2O_5 contents are in the range of 25-30%, other impurities are within the permissible limits except at some horizons carbonate and iron content is on the high side. The total reserves of this area are 1.08 million metric tons of various grades. Moreover the spectrophotometric method is more sensitive toward P_2O_5 contents determination.

INTRODUCTION

Phosphorus compounds play a vital role in the living processes and are essential not only for heredity process but also for growth, development and maintenance of all plants and animals. Energy transfer processes such as photosynthesis, metabolism, nerve function and muscle action all involve phosphorus compounds.

Phosphorus is not found free in nature but always occur in the fully oxidized form as phosphate in rocks and oceans. About 80-85% phosphate are used as fertilizers, synthetic detergents come second and animal food stuffs third [1].

Phosphate modules in the subcontinent were first reported in 1887 by the Geological Survey of India [2]. Tahir Kheli [3] and Latif [4, 5] also described the rock phosphate of this area while Ishaq [6] undertook studies on the utilization of these rocks.

Pakistan is importing rock phosphate from Jordan and Morocco inorder to fulfil its need for fertilizer industry thus spending a huge amount of foreign-exchange. Realizing this urgent need the present work was undertaken.

EXPERIMENTAL

Analytical Method: The rock phosphate samples of -100 - -125 mesh size from different mines of Kakul area were provided by Sarhad Development Authority. For complete