土倉及び別子鑛山における鑛液の分化

(摘要)

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土倉及び別子兩鑛山の鑛石を分析した結果、鑛液は遡出前に既に溜の中で、互に制限的溶解をなす3種の鑛液に分化していたものであることが判つた。分化成生物は何れも水分に乏しい濃厚粘稠な液體として遡出したものであるらしい。

短 報

T. SAMESHIMA and R. MINAMI: An X-Ray Study on the Phosphorite Mineral

Phosphorite has been considered to be consisted of the mineral named Collophane, but X-ray powder photographs showed that the mineral of phosphorite, in every case, is simply apatite, though sometimes the crystal grain size is very fine.

Eight x-ray powder photographs have been taken on phosphorites from Cosseir, Florida, Saipan, Greenwich, Makatea, Tennessee, Raokai and Kaishu respectively. As a comparison, two photographs of apatite crystal specimens from different localities, Hôkizawa, Kanagawa Pref., and Ashio copper mine in Tochigi Pref., have been taken.

Diffraction lines appeared on the phosphorite photographs are fairly correspond with the lines on the apatite photographs. In every case no lines other than apatite has been recognized. The samples used for the determination have been purified through a heavy liquid ($d=2.85$) to remove sand grains (quartz, feldspars, and in a few cases muscovite) mixed in them.

In the case of some phosphorites, the photographs could be taken only after a long exposure, in such cases the diffraction lines are not sharp, and this fact showed the minuteness of the crystal grain, it seemed. Under a high power microscope, the crystal grain size has been examined to be 100μ to less than 0.5μ in diameter. It has been found that finer crystal grains of the phosphorite hold higher fertilizer available ratio.

Locality	Occurrence of the phosphorite
Cosseir, Northern Africa	Tertiary sedimentary deposits
Florida, North America	"
Greenwich, Intra pacific Island	Recent secondary enriched pocket in coral reef
Makatea, "	"
Saipan, "	"
Tennessee, North America	Palaeozoic sedimentary deposits
Raokai, French Indo China	Regionally metamorphosed sedimentary deposits
Kaishu, Northern Ohina	"