

Special Laboratory Work on Chlorite

In order to determine the chlorite of schists of the area from all schist specimens thin sections were prepared and studied. Four samples were selected according to their chlorite content. They are from west around Mültern to east around Habich. Generally they are poor in chlorite content. The chlorites show anomalous interference colour, their medium grain size varies between 0,05—0,09 millimeter. Refractive index is 1,59—1,60 = n_y , optic sign. pos.

To obtain more information for determination of chlorite their powder patterns were prepared. X-ray spectography showed that the peaks were corresponding with powder patterns of 14 Å chlorite specimen examined by SHIROZU but the intensities except for 001 vary. The variations are in the intensities of 0kl peaks which are characterised by the b axis and according to SHIROZU is effected by Fe content of chlorite.

Overall with reference to the diagram of chlorite group by TRÖGER it is a chlorite between Mg-Prochlorite and Klinochlorite.

For further and more detailed determination the X-ray photography of samples should be prepared in order to obtain 0k0 (060) for calculating b which will reveal Fe content of chlorite.

Zircons of some Gneisses from the Area north east Bernstein

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According to zircon analyses for gneisses from the area north east Bernstein, the following conclusions may be drawn. The assumption of sedimentary origin of some grobgnéis and granitic gneisses, are confirmed by the large amount of rounded and subhedral zircons found in these types of gneisses.

The zircons of different metasediments are not similar, so possibly the original sediment was not of one type. The fine grains of zircon in para-Grobgnéis together with other habits indicate, that the sediment from which the para-Grohgnéis was derived probably was more sandy.

The orthogneisses are confirmed by the large amount of euhedral zircons found in these type of gneisses.

Zircon habits of different orthogneisses indicate that, the original acidic igneous rocks probably were not of one type. Zircon of ortho-igneous gneisses is smaller than that of ortho-gneiss.

It is found that there are two types of ortho-Grobgnéis. The first contains self nucleated zircons and the second contains zircons nucleated on other minerals.

In general the metamorphic conditions necessary to the forming of the growth was not reached or only were for a short time. There was very few effect of alkaline solution before or after the metamorphism. Due to growthratio we can say that the ortho-igneous gneiss probably is of lower metamorphic grade than the ortho-Grobgnéis.