

- b.) preliminary Rb-Sr whole rock isochron of 2 samples (30 - 50 kg) from Šejby granite stock yields an age of 301 ± 41 Ma and a corresponding $^{87}\text{Sr}/^{86}\text{Sr}$ initial ratio 0.736535 ± 0.00029 (Fig. 2).

The stocks of the muscovite leucogranites (Šejby and Nakolice bodies) as well as an extremely differentiated granite of Homolka type (about 300 Ma - BENDL et al., 1994) and acid dyke subvolcanites (295 Ma - KLEČKA et al., 1994) represent the youngest (final) magmatic products in the Moldanubian core of the Bohemian Massif.

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Rb-Sr DATING OF THE TOPAZ-BEARING MUSCOVITE GRANITE STOCK HOMOLKA, MOLDANUBIAN BATHOLITH

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The stock of an extremely differentiated topaz-bearing muscovite alkali-feldspar granite of "Homolka type" with Sn-(Nb-Ta) mineralization is located 5 km W of Nová Bystřice, close to the Austrian boundary (KLEČKA & ŠREIN, 1992; KLEČKA et al., in print). It has roughly an oval shape elongated in N-S direction and a surface area of 6 km². The body intruded generally along a contact of two earlier intrusive granitic phases - the Lásenice and Eisgarn (Číměř variety) types. The Homolka granite stock is spatially and also genetically linked with subvolcanic acid dykes that constitute a N-S trending "volcanotectonic zone Želiv - Lásenice", about 85 km long (KLEČKA & VAŇKOVÁ 1988; KLEČKA, 1992; KLEČKA et al., 1994). Petrographically, the body is relatively homogenous; medium- to coarse-grained types predominate. Marginal pegmatites are locally developed in the northern and southern endocontact zone. Relatively abundant granite porphyries are found in the southern part of the stock. The body is penetrated by 0.1 to 0.5 m thick dykes of aplite and pegmatite.

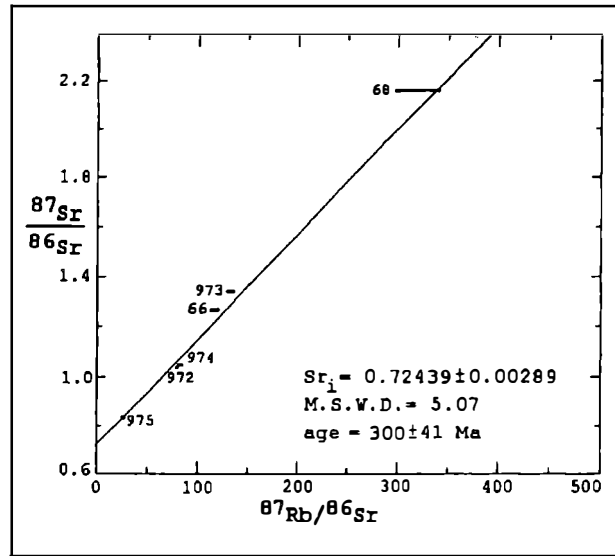


Fig.1: Rb-Sr isochrone plot for the Homolka granite stock, Moldanubian Batholith.

Modal composition of the main type of Homolka granite fluctuates within the range: quartz 32.2 - 37.0 %, albite 26.5 - 30.0 %, K-feldspar 14.6 - 25.5 %, muscovite 12.8 - 16.0 %, topaz 0.8 - 1.8 %, apatite 0.6 - 1.0 %. Accessory minerals include chloritized relicts after biotite, cassiterite, ferrocolumbite, fluorite, ilmenite to pseudorutile, zircon, Nb-Ta rutile and five types of phosphate minerals, arsenopyrite and uranium "micas" on joints (mainly torbernite).

Chemical analyses of 34 samples from the stock indicate that Homolka granite is characterized by high contents of SiO_2 (71.3 - 74.1 wt.%), Al_2O_3 (14.7 - 16.2 wt.%), P_2O_5 (0.7 - 1.0 wt.%) and Na_2O (4.1 - 5.6 wt.%) which is in excess of K_2O (3.3 - 3.9 wt.%) and by low contents of CaO (0.3 - 0.6 wt.%) and MgO (dominantly <0.05 wt.%). The contents of trace elements are following: Rb (1060 - 1560 ppm), Sn (54 - 314 ppm), Nb (47 - 150 ppm), Ba (mostly below 50 ppm), Sr (25 - 80 ppm) and Zn (10 - 30 ppm). Total REEs is very low - about 10 ppm, the La_N/Yb_N ratios vary from 1.5 to 3.5.

Rb-Sr whole rock isochron of 6 samples (from all granite varieties of Homolka stock; weight of samples 30-50 kg) yields an age of 300 ± 41 Ma and corresponding $^{87}\text{Sr}/^{86}\text{Sr}$ initial ratio of 0.72439 ± 0.00289 (Fig. 1).

The obtained ages (300 Ma for Homolka granite and 295 Ma for acid subvolcanic dykes - KLEČKA et al., 1994) values straddle the Carboniferous - Permian boundary. According to the geochemistry, results of zircon typology and high Sr initials, the Homolka granite (0.72439) as well as the acid subvolcanic dykes

(0.71575) seem to be the latest product of extreme differentiation of an S-type granite melt.

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GEOCHEMISCHE CHARAKTERISIERUNG VON METABASITEN IM WESTLICHEN ÖTZTAL-STUBAI-KRISTALLIN (KAUNERTAL)

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In drei Bereichen des ostalpinen Kristallins des Kautertales wurden die Metabasite (darunter werden hier orthogene Gesteine mit $\text{SiO}_2 < 65$ Gew.-% verstanden) auf Haupt-, Spuren- und Selten-Erd-Elemente untersucht:

- (1) Die Amphibolitkörper des Krümmgampenmassivs im hintersten Kautertal mit einer Ausdehnung von etwa 300 x 1000 m (10 Proben). Petrographisch handelt es sich um Amphibolite mit teilweiser Granat- oder Klinopyroxenführung.
- (2) Zwei je 50 m mächtige, konkordante Metabasitzüge im Bereich des Fisslädtales im mittleren Kautertal bestehen aus Amphiboliten und Hornblendegneisen, die lokal Andradit, Spessartin, Klinopyroxen oder Cummingtonit enthalten (22 Proben).
- (3) Mehrere bis zu einigen 100 m mächtige Metabasitzüge südlich des Verpeiltales (15 Proben). Diese Vorkommen enthalten neben teilweise Klinopyroxen-führenden Amphiboliten und Hornblendegneisen reichlich diablatische Granatamphibolite und auch Eklogitrelikte.

Magmatische Minerale (ausgenommen Zirkon in sehr hochfraktionierten Proben) oder Gefügerelikte konnten in den Metabasiten nicht beobachtet werden. Nach den