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PHASE TRANSFORMATIONS IN SEPIOLITE AND PALYGORSKITE AT DIFFERENT PRESSURES UNDER HYDROTHERMAL CONDITIONS

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Sepiolite and palygorskite are layer-chain silicates composed of pyroxene-type chains connected by oxygen bridges (Fig.1A,B) /1,2/. In palygorskite the chains are double and in sepiolite, triple pyroxene chains.

The behavior of these structurally similar minerals under hydrothermal conditions, at elevated temperatures and pressures, is of interest in connection with investigations of structural transformations in the principal components of sediments /3,4/.

Starting materials . The samples used in the investigation were palygorskite from the Pamirs /5/ and sepiolite from Karamazar /6/. The chemical composition of these minerals is shown in Table 1.

Table 1

The crystallochemical formula of palygorskite was calculated on the basis of anion $(Si_8O_{20})^{8-}$: