

## Minerals from Macedonia. XXIV. Spectroscopic and Structural Characterization of Tectosilicates

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Continuing the process of systematic spectra-structural studies on the silicate minerals originating from Macedonia [1–6], several representatives from the feldspar species: albite,  $\text{NaAlSi}_3\text{O}_8$ ; microcline,  $\text{KAlSi}_3\text{O}_8$ ; sanidine,  $\text{KAlSi}_3\text{O}_8$ ; orthoclase,  $\text{KAlSi}_3\text{O}_8$  were studied by vibrational spectroscopy and powder X-ray diffraction. Despite the common structural characteristics it was shown that IR ( $1300\text{--}370\text{ cm}^{-1}$ ) and particularly Raman spectroscopy ( $1300\text{--}100\text{ cm}^{-1}$ ) could clearly discriminate between sanidine, albite and orthoclase/microcline. However, since both latter minerals show practically identical IR as well as nearly identical Raman spectra their discrimination and identification was based on the corresponding powder X-ray diagrams. In addition, an attempt to interpret the powder vibrational spectra of rare-occurring zeolite mineral – stilbite-Na,  $(\text{NaCa}_2\text{Al}_5\text{Si}_{13}\text{O}_{36}\cdot 14\text{H}_2\text{O})$  was undertaken. The chemical formulas are written according to the results from the X-ray microprobe analysis.

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