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Ye. E. SAVCHENKO,* T. L. PANIKOROVSKII.**** ABOUT THE COMPOSITION
OF MELIPHANITE FROM NEPHELINE SYENITE PEGMATITE
OF THE SAKHARJOK MASSIF (KOLA PENINSULA)

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The rare beryllium silicate — meliphanite has been studied in the nepheline syenite pegmatite of Sakharjok massif, at Kola Peninsula, with the purpose to refine the chemical composition of this mineral, particularly in its anionic part. Investigation included infrared (IR) and Raman spectroscopy, chemical and electron microprobe analyses, thermogravimetric analysis, and the single crystal X-ray diffraction. Obtained data confirm the presence of OH-groups in meliphanite from Sakharjok, but fluorine is dominant among anions. Its empirical formula, according to the single-crystal study results and taken into account chemical data, is as following: $\text{Ca}_{4.00}(\text{Na}_{3.12}\text{Ca}_{0.88})_{\Sigma 4.00}(\text{Be}_{3.60}\text{Si}_{0.40})_{\Sigma 4.00}\text{Al}_{1.00} \cdot (\text{Si}_{6.74}\text{Be}_{0.26})_{\Sigma 7.00}\text{O}_{24.00}[\text{F}_{3.33}(\text{OH})_{0.51}\text{O}_{0.16}]_{\Sigma 4.00}$. Meliphanite absorbs water during trituration, what should be taken into account in research, IR-spectroscopy in particular.

Key words: beryllium silicate, meliphanite, chemical composition, crystal structure, electron microprobe analysis, infrared spectroscopy, thermogravimetric analysis, Raman spectroscopy, single crystal X-ray diffraction, Penfield method, pegmatite, nepheline syenite, Sakharjok massif, Kola Peninsula.