

## MINERALOGY OF LAMPROPHYRES FROM THE DITRÁU ALKALINE MASSIF, ROMANIA

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Lamprophyres are a group of H<sub>2</sub>O and/or CO<sub>2</sub>-rich, alkaline rocks ranging from sodic to potassic and from ultrabasic to intermediate. They typically form subvolcanic dykes, sills, pipes and vents (ROCK, 1991).

The Ditráú Alkaline Massif (DAM) is one of the most diverse and compound geological formations of the Eastern Carpathians. The massif was formed by hornblende, diorite (called Tarnica Complex, PÁL-MOLNÁR, 2000), syenite, nepheline syenite, alkali granite and monzonite which are cut by late-stage lamprophyre (camptonite and kersantite) dykes. This paper presents the results of mineralogical analyses investigated on lamprophyres from the northern part of the DAM.

Mineral compositions were measured with a Cameca SX50 electron microprobe at the Department of Earth Sciences, University of Uppsala, Sweden. Operating conditions: probe current 15 nA, acceleration voltage 20 kV.

Essential ferromagnesian phases in the studied lamprophyres are calcic and Ti-rich groundmass amphiboles (Fig. 1A, B) and phenocrystic pyroxenes (Fig. 1E), abundant biotites-phlogopites with mg# = 0.47-0.75 (Fig. 1D) and melanitic garnets with the composition of

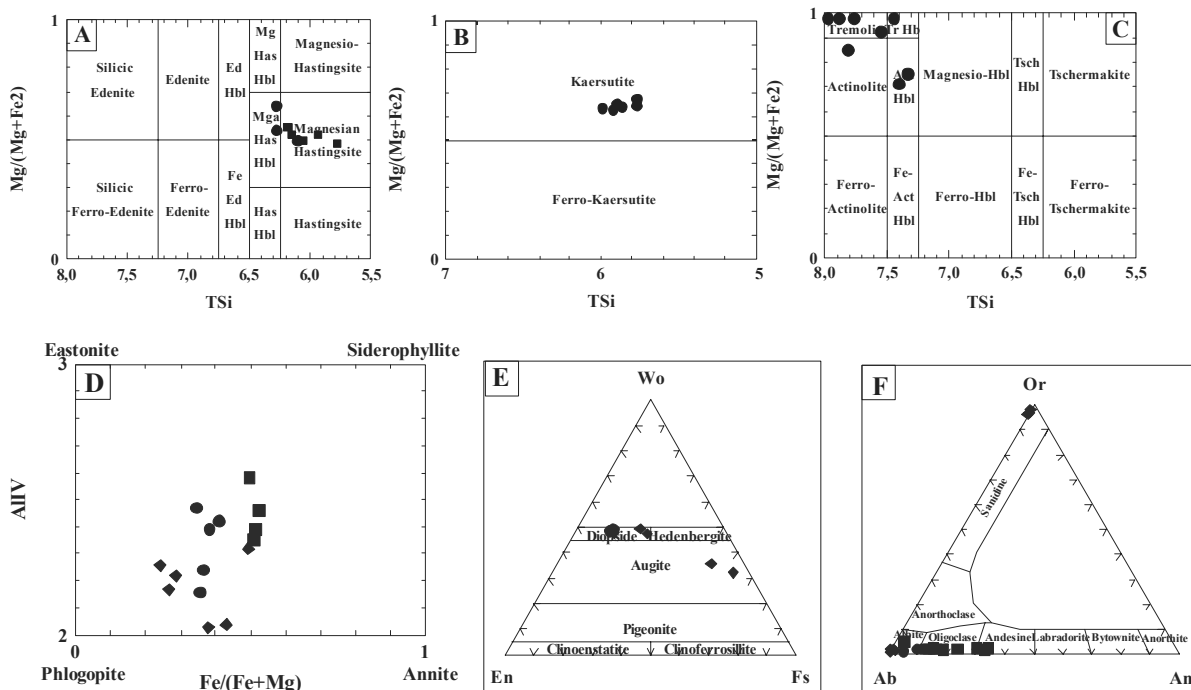
Ca<sub>3.1</sub>Fe<sub>1.4</sub>Ti<sub>0.16</sub>Al<sub>0.5</sub>Si<sub>3</sub>O<sub>12</sub>. Lamprophyres from the DAM also carry plagioclase feldspars (albite–andesine with An<sub>0.1–34</sub>), some K-feldspars (Fig. 1F), feldspathoids and carbonates. Accessories are apatite, titanite, magnetite and zircon. Post-magmatic or secondary phases are tremolite–actinolite (Fig. 1C) chlorite (FeO 13 to 24 wt%), sericite, epidote and allanite-(Ce, La).

## Acknowledgements

The financial background for this work was provided by the Hungarian National Science Found (OTKA, Grant No. T 046736) and the Department of Geology and Geochemistry, Stockholm University, Sweden.

## References

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ROCK, N.M.S. (1991): Lamprophyres. Glasgow: Blackie, 285 pp.



**Fig. 1:** Compositions of amphiboles (A, B, C), biotites (D), pyroxenes (E) and feldspars (F) in ● camptonites – Tarnica Complex, ■ camptonites – Török Creek and ◆ kersantites – Török and Nagyág Creek (DAM).