

COMPARATIVE PETROLOGY AND GEOCHEMISTRY OF SOME ULTRAMAFICS FROM THE WESTERN ALPS OPHIOLITES

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Data on petrology and geochemistry of rocks from seven ultramafic suites from Piedmont Zone in the Western Alps have been presented and compared, together with basic field data.

They suffered the eo-Alpine HP metamorphism and greenschist facies conditions and appear to be represented by fragments of Tethyan oceanic lithosphere. They have extensively serpentinized and scarcely chloritized and obliterated the original textures and mineral association. In a few cases, these rocks were probably derived from lherzolite and pyroxenite in the Arc valley and spinel lherzolite in Monviso and are depleted in fusible elements and may follow a very high temperature. The ultramafic rocks of Roche Noire and Chenaillet are probably less depleted in fusible elements and followed slightly lower temperature.

The serpentinization of these ultramafics is mostly characterized by enrichment of MgO and La and depletion of Al_2O_3 , CaO, Sc and Y, while the chloritization shows decrease in MgO and Nb, increase in Al_2O_3 , CaO, TiO_2 , Zr and Sc content. The P_2O_5 , $FeO_{(total)}$ and Al_2O_3 contents obviously increase, while MgO content decrease with increasing M.I. They fall into the ophiolitic ultramafic, ultramafic cumulate and scarce metamorphic peridotite fields on the diagrams.

FLUIDE EINSCHLÜSSE MIT TOCHTERMINERALEN IM TAUERNFENSTER

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Im Tauernfenster waren hauptsächlich die schwach salinaren, H_2O -reichen sowie CO_2 -reichen fluiden Einschlüsse der alpinen Kluftminerale Gegenstand ausführlicher Untersuchungen (z.B. LUCKSCHEITER & MORTEANI 1980, HOEFS & MORTEANI, 1979). Diese Einschlüsse werden als retrograde alpidische Bildungen betrachtet.

Fluide Einschlüsse mit bis zu 2 Tochtermineralen (mit/ohne CO_2 -Führung) wurden bisher nur kurz beschrieben. Derartige Einschlüsse wurden im westlichen Tauernfenster in verschiedenen Gesteinen nachgewiesen, und zwar in den Gesteinen der Habachgruppe, des Zwölferzuges sowie im Zentralgneis der Habachzunge und des Zillertaler Kerns. Die fluiden Einschlüsse mit Tochtermineralen sind überwiegend in grobkörnigen Quarzrelikten zu finden. Bisher konnten 3 verschiedene Tochterminerale