

MASOUD Ahmed Elsaid, YANG Jingsui and LIU Fei, 2015. Compositional Variation and Mineral Chemistry of Jinshajiang and Lancangjiang Serpentinites, Yunnan Province, SW China. *Acta Geologica Sinica* (English Edition), 89(supp. 2): 60.

Compositional Variation and Mineral Chemistry of Jinshajiang and Lancangjiang Serpentinites, Yunnan Province, SW China

MASOUD Ahmed Elsaid^{1, 2, 3}, YANG Jingsui^{1, 2*} and LIU Fei²

1 Faculty of Earth Sciences, China University of Geosciences, Wuhan 430074, China

2 State Key Laboratory of Continental Tectonics and Dynamics, Institute of Geology, Chinese Academy of Geological Sciences, Beijing 100037, China

3 Geology Department, Faculty of Science, Tanta University, Tanta, Egypt

We present the whole-rock and the mineral chemical data for upper mantle peridotites from the San-Jiang region in Yunnan Province, SW China. These peridotites are part of a Paleo-Tethyan ophiolite belt occurring along the Jinshajiang and Lancangjiang suture zones. All samples of Jinshajiang and Lancangjiang ultramafic rocks are completely serpentinized. The Jinshajiang serpentinites are characterized by no relict of Olivine and Pyroxene, and the Cr number of spinels is 0.32-0.49. The Lancangjiang serpentinites were collected from two different locations; the northern location which has some relict of Opx (Al_2O_3 is 0.13-2.20 wt%, TiO_2 is 0.004-0.057 wt% and Mg number is 0.895-0.933) and the Cr number of spinel is 0.26-0.55; the southern location, which has some relict of Olivine ($Fo= 90-92.5$ and $NiO=0.12-0.26$ wt%), and spinel $Cr^\#$

ranging from 0.41 to 0.57. The whole rock and the mineral chemistry data imply that the Jinshajiang and Lancangjiang serpentinites representing abyssal peridotites that residues after ~15%-20% partial melting for Jinshajiang and Lancangjiang serpentinites (south location), and ~11%-19% partial melting for Lancangjiang serpentinites (north location). In addition, the Lancangjiang serpentinites imply that MORB melt-peridotite interaction process played a significant role during their evolution. These processes are evidenced by an increase in $Cr^\#$ and TiO_2 of the spinels from it, whereas the spinels of Jinshajiang serpentinites display increase in $Cr^\#$ with decrease TiO_2 , which might representing MOR-type peridotites for both of Lancangjiang and Jinshajiang serpentinites.

* Corresponding author. E-mail: yangjsui@163.com