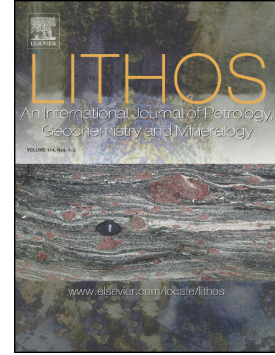


Accepted Manuscript

Sodium-chromium covariation in residual clinopyroxenes from abyssal peridotites sampled in the 43–46°E region of the Southwest Indian Ridge

Monique Seyler, Daniele Brunelli



PII: S0024-4937(17)30453-X
DOI: <https://doi.org/10.1016/j.lithos.2017.12.018>
Reference: LITHOS 4517

To appear in:

Received date: 29 May 2017
Accepted date: 20 December 2017

Please cite this article as: Monique Seyler, Daniele Brunelli , Sodium-chromium covariation in residual clinopyroxenes from abyssal peridotites sampled in the 43–46°E region of the Southwest Indian Ridge. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Lithos(2017), <https://doi.org/10.1016/j.lithos.2017.12.018>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Sodium-chromium covariation in residual clinopyroxenes from abyssal peridotites sampled in the 43–46°E region of the Southwest Indian Ridge

Monique Seyler^{a,*} and Daniele Brunelli^{b,c}

^a Univ. Lille, CNRS, Univ. Littoral Côte d'Opale, UMR 8187, LOG, Laboratoire d'Océanologie et de Géosciences, F 59000 Lille, France. E-mail: monique.seyler@univ-lille1.fr

^b Dipartimento di Scienze Chimiche e Geologiche, Università di Modena e Reggio Emilia, via Campi, 103, 41125 Modena, Italy. E-mail: daniele.brunelli@unimore.it

^c Istituto di Scienze Marine ISMAR-CNR, 40129 Bologna, Italy

* Corresponding author

ABSTRACT

Mantle-derived peridotites sampled at three dredge sites between the Discovery and Indomed fracture zones on the Southwest Indian Ridge axis are analyzed for petrography and major and trace element mineral compositions. While textures and microstructures are those typical of normal residual peridotites these rocks display a large compositional variation encompassing the whole spectrum of abyssal peridotites even at the scale of a single dredge site (≤ 1 km). Particularly, clinopyroxenes in peridotites dredged at 44.03° E show a huge variation in sodium contents positively correlated with chromium concentrations. Observed Na-Cr enrichments exceed the commonly reported contents of the spinel abyssal peridotites. Similar values are only found in very few peridotite samples collected at ultra-slow spreading ridges. Major

Download English Version:

<https://daneshyari.com/en/article/8911695>

Download Persian Version:

<https://daneshyari.com/article/8911695>

[Daneshyari.com](https://daneshyari.com)