

Accepted Manuscript

Petrogenesis and origin of modern Ethiopian rift basalts: Constraints from isotope and trace element geochemistry

D. Ayalew, S. Jung, R.L. Romer, F. Kersten, J.A. Pfänder, D. Garbe-Schönberg

PII: S0024-4937(16)30028-7
DOI: doi: [10.1016/j.lithos.2016.04.001](https://doi.org/10.1016/j.lithos.2016.04.001)
Reference: LITHOS 3887

To appear in: *LITHOS*

Received date: 23 September 2015
Accepted date: 5 April 2016



Please cite this article as: Ayalew, D., Jung, S., Romer, R.L., Kersten, F., Pfänder, J.A., Garbe-Schönberg, D., Petrogenesis and origin of modern Ethiopian rift basalts: Constraints from isotope and trace element geochemistry, *LITHOS* (2016), doi: [10.1016/j.lithos.2016.04.001](https://doi.org/10.1016/j.lithos.2016.04.001)

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.

Petrogenesis and origin of modern Ethiopian rift basalts: constraints from isotope and trace element geochemistry

Ayalew, D.¹, Jung, S.², Romer, R.L.³, Kersten, F.⁴, Pfänder, J.A.⁴, Garbe-Schönberg, D.⁵

¹School of Earth Sciences, Addis Ababa University, P.O. Box 1176, Addis Ababa, Ethiopia

²Mineralogisch-Petrographisches Institut, Universität Hamburg, Grindelallee 48, 20146 Hamburg, Germany

³Helmholtz-Zentrum Potsdam, Deutsches GeoForschungsZentrum GFZ, Telegrafenberg, 14473 Potsdam, Germany

⁴Geologisches Institut, Technische Universität-Bergakademie Freiberg, Bernhard-von-Cotta Str.2, 09599 Freiberg, Germany

⁵Institut für Geowissenschaften, Abteilung Geologie, Universität Kiel, Ludewig-Meyn-Strasse 10, 24118 Kiel, Germany

Abstract

The source of continental rift-related basalts and their relation to rifting processes is a continuous matter of debate. We present major and trace element and Sr, Nd, Hf and Pb isotope data for axial rift basalts from eight volcanic centres (Ayelu, Hertali, Dofan, Fantale, Kone, Bosetti and Gedemsa, from NE to SW) in Afar and Main Ethiopian Rift (MER) to assess their source regions and their genetic relationships. These lavas have geochemical

Download English Version:

<https://daneshyari.com/en/article/6440431>

Download Persian Version:

<https://daneshyari.com/article/6440431>

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