

Accepted Manuscript

Distribution and enrichment of heavy metals in Sabratha coastal sediments,
Mediterranean Sea, Libya

Hamdy E. Nour, Abdelbaset S. El-Sorogy



PII: S1464-343X(17)30275-3

DOI: [10.1016/j.jafrearsci.2017.06.019](https://doi.org/10.1016/j.jafrearsci.2017.06.019)

Reference: AES 2942

To appear in: *Journal of African Earth Sciences*

Received Date: 30 March 2017

Revised Date: 5 May 2017

Accepted Date: 22 June 2017

Please cite this article as: Nour, H.E., El-Sorogy, A.S., Distribution and enrichment of heavy metals in Sabratha coastal sediments, Mediterranean Sea, Libya, *Journal of African Earth Sciences* (2017), doi: 10.1016/j.jafrearsci.2017.06.019.

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.

**Distribution and enrichment of heavy metals in Sabratha coastal sediments,
Mediterranean Sea, Libya**

Hamdy E. Nour¹ and Abdelbaset S. El-Sorogy^{1,2}

¹Geology Department, Faculty of Science, Zagazig University, Egypt.

²Geology and Geophysics Department, College of Science, King Saud University, Saudi Arabia.

Abstract

In order to assess heavy metal pollutants in Sabratha coastal sediments, Mediterranean Sea, Libya, 30 sediment samples were collected for Fe, Cu, Pb, Mn, Cd, Co, Ni and Zn analysis using Atomic Absorption Spectrometry. The analysis indicated that, the Sabratha 's coastal sediments were enriched with Cd, Pb, Cu, Ni, Co and Zn (EF = 81.48, 17.26, 12.80, 11.42, 9.85 and 8.56 respectively). The highest levels of Mn, Cu, Ni, Pb and Co were recorded nearby the Mellitah complex oil and gas station in the western Libyan region, while the highest levels of Zn and Cd were recorded at the central part of the study area nearby fishing port and Sabratha hospital. Average values of Cd, Pb and Co were mostly higher than the ones recorded from the Arabian and Oman gulfs, the Red Sea, the Gulf of Aqaba, the Caspian Sea, coast of Tanzania and the background shale and the earth's crust. The high levels of most of the studied heavy metals suggested significant anthropogenic sources along Sabratha coast. The results of the present study provide a useful background for further marine studies on the Mediterranean area.

Keywords: Enrichment, Heavy metals, Coastal sediments, Sabratha, Mediterranean Sea, Libya.

Download English Version:

<https://daneshyari.com/en/article/5785553>

Download Persian Version:

<https://daneshyari.com/article/5785553>

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