عنوان مقاله:

Mineralogical characterization of the traditional geopharmaceutical ithmid by XRF and XRD

محل انتشار:

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خلاصه مقاله:

Geopharmaceuticals, specifically minerals were used to treat various diseases from antiquity. Ithmid or kohl stone is one of the most-applied geopharmaceuticals in the Middle East, Africa, and South Asia. The usage of ithmid for eye make-up caused many concerns about the possible toxicity and lead poisoning, because the concentration of lead content is usually higher than the international standard limit. The goal of this study was mineralogical investigation of ithmid stones (three samples) from Iran using XRD and XRF. Also, traditional applications of ithmid were extracted and reported. X-ray diffractometer and X-ray fluorescence analysis was used to determine the composition of three samples of ithmid stone from Tehran, Shiraz, and Kerman. The indications suggested for ithmid in Traditional Iranian Medicine were extracted from Makhzan al advieh, Qarabadin Salehi, and Qarabadin Kabir. Major phase of ithmid samples were galena (PbS), and the main element was lead with a high concentration in all three samples. Based on traditional books, ithmid was used for ocular injuries, infectious wounds, and visual disorders. It was proved that ithmid has antimicrobial effects against pathogens involved in ocular infections, but regular application of such products is a potential threat for costumer health. Therefore, regular check-out of kohl products by authorities is necessary to avoid the risk of lead toxicity and resultant health issues.

کلمات کلیدی:

geopharmaceutical, ithmid, kohl, galena, XRD, XRF