Review of: "Probabilistic Assessment of the Heavy Metal Pollution in Debrecen's Topsoil"

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Potential competing interests: No potential competing interests to declare.

Manuscript : Probabilistic Assessment of the Heavy Metal Pollution in Debrecen's Topsoil

DECISION

The manuscript deals with a very interesting issue, which evaluates the level of soil pollution in Debrecen. The Niton XL5Plus X-ray fluorescence (XRF) analyzer gives information about chemical elements in a rapid, cost-effective, and environmentally friendly manner, without the need for chemical reagents. This work can be published in Qeios after major revisions.

GENERAL COMMENTS

-The introduction, discussion, and conclusion parts should be improved.

- Authors should cite in their manuscript other articles published in this journal.

SPECIFIC COMMENTS

1. Introduction

- What are the results from the studies already carried out in the study zone?

2. Materials and methods

- Provide the map of the study area.

- Indicate the sampling period.

- - Have the measurements of metal concentrations been done in triplicate or duplicate? Please clarify.

- Is the Niton XL5Plus X-ray fluorescence (XRF) analyzer technique for determining trace metals concentrations reproducible?

- Given that concentrations are important in the calculation of pollution indices, for example, is this technique sufficient to get a clear idea of the concentrations of elements in the sediments?

- Why was the acid digestion method of sediments not coupled with the Niton XL5Plus X-ray fluorescence (XRF)

technique ?

- Explain how the ecological risks have been assessed.

3. Results and discussion

- The ecological risk index values are not reported in the manuscript.

- Authors should compare their data to those found in the literature.

- Please give about ½ page of the implications of the study to your country and other parts of the world in the discussion section.