Do the contents of mineral elements in Algerian spices useful for digestive diseases?

The foods has become a major concern for producer and consumer, due to growing competition for the highly demanding in food product, in order to fetch high profit. Hence, recently there is growing numbers of researches in the field of food including cereals, vegetables, spices and herbal drug plants in different origins

The mineral elements known to cure many diseases, they are very useful in digestive diseases, doctors always prescribe foods and medicines that contain mineral elements for patients with digestive diseases. The presences of elements in too high or too low levels have important consequences for the organisms.

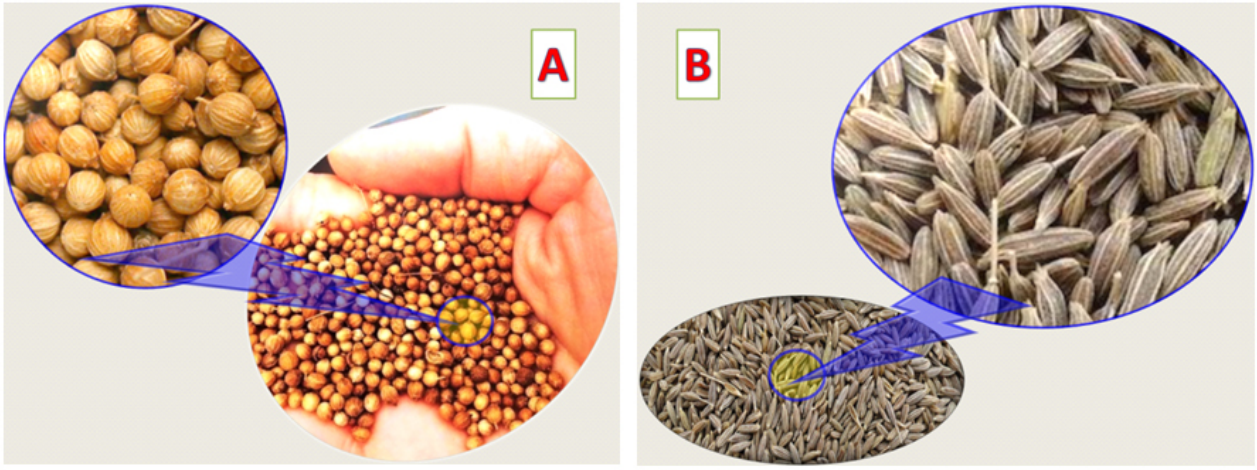

Fig. 1. Seeds of Coriandrum sativum L (A) and Cuminum cyminum L. (B), (family Apiaceae).

Coriandrum sativum L., commonly named coriander (locally known as “kuzbura”) (Fig. 1A) and *Cuminum cyminum* L., commonly named cumin (Fig. 1B); are aromatic species that belong to the family of Umbelliferae (Apiaceae). Those spices are widely used in Algerian traditional medicine and the Algerian food.

The aim of this investigation was evaluated some micronutrients and toxic elements in two Algerian Spices (*Coriandrum sativum* L., *Cuminum cyminum* L.), using one of the sensitive analytical techniques which was instrumental neutron activation analysis.

In the present investigation, quantitative determinations of twenty-two elements viz As, Ba, Br, Ca, Ce, Co, Cr, Cs, Eu, Na, Fe, K, La, Nd, Rb, Se, Sb, Sc, Sm, Sr, Th and Zn, the results presented

eight essential chemical elements "micronutrients" with tendency K> Ca > Na > Fe > Zn > Cr > Co > Se, and some potential toxic elements were presented in the descending content pattern as Br > As > Sb, and eleven other elements.

The results show that Co, Se, As, Sb, Ce, Cs, Eu, La, Nd, Sc, Sm and Th are found to be present at trace levels, while Zn, Cr, Br, Ba and Rb at the minor level, the elements (Fe, K, Sr and Na) are at the major level.

The results of the estimation of intake of micronutrients and potentially toxic elements in the samples show that, the contents of toxic elements are well below toxicological reference values and were found to satisfy nutritional recommendations by the Joint WHO/FAO; therefore its toxic effects will be negligible.

The data obtained in this research could be a promising source of nutritional elements like Fe, Zn, Se, Ca, Na and K which may be helpful for digestive diseases.

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