

Minerals in edible seaweed: health benefits and food safety issues

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Abstract

An adequate daily intake of minerals is essential for the prevention of chronic nutrition-related and degenerative diseases, including cancer, cardiovascular disease, and obesity. Seaweeds are marine aquatic vegetable that are rich in nutrients. They also have a natural and sustainable origin and clean and renewable sources when they come from marine aquaculture or controlled fisheries. Seaweeds have high nutritional value as a source of polyunsaturated fatty acids, proteins, carbohydrates, vitamins, and especially minerals. They are known for their high mineral content, which is gathered from seawater depending on the seasonal variation and the environment. Seaweeds are consequently rich in macro-elements and trace elements, with a mineral content at least 10 times higher than terrestrial plants and reaching 20-50% of its dry weight. Therefore, seaweeds can make an important contribution to the daily intake of minerals and are a promising source of essential minerals for functional food, food supplements, and nutraceuticals. The aim of the present review is to compare the contents of essential minerals (K, Ca, Na, P, Cu, Fe, Se, Mn, Zn, Mg, Cr, and I) as well as potential toxic minerals (Hg, Pb, Cd, As, and Al) in 14 main edible seaweeds that have availability of biomass from harvest and aquaculture. Another goal is to establish their safety in foods and contributions to the Recommended Dietary Allowance (RDA) and adequate intake (AI) values.

Palabras clave

Palabras clave de autor: [Seaweed](#); [minerals](#); [food safety](#); [food composition](#); [nutraceuticals](#)

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