

NUTRIENTS IN ROSELLE (*Hibiscus sabdariffa*): Minerals

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April 2021



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Roselle: A good source of important minerals for human health.

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Roselle is a crop native to the tropics of West Africa, and is widely consumed in Asia, Africa, and the Caribbean. This crop goes by many names including sorrel, hibiscus, and Florida cranberry. Hibiscus tea is the most familiar form of edible roselle in the United States and is typically made from calyces. However, roselle leaves are also delicious and consumed in teas, salads, stews, and chutneys around the world¹.

Just like other vegetables, roselle leaves can be an important source of certain minerals. Dark, leafy greens, like kale and spinach, are touted as great sources of iron, magnesium, calcium, and potassium². When compared on a dry matter basis, Thai Red roselle (commercially available) may only have half the potassium of these better-known greens, but it matches the iron content of kale and exceeds the calcium and magnesium content of kale³.

A recent UDC study comparing the leaves of Thai Red with those of five roselle varieties from the USDA Germplasm Repository and one locally cultivated variety showed that some of these other varieties outperformed the commercially available variety for magnesium and calcium; content of the latter was nearly double the calcium content of kale.

Why are these minerals important to health and bodily function?

Iron, magnesium, calcium, and potassium are all essential minerals and the last three are also common electrolytes⁴.

Iron is found in every cell in the human body. It is required to make hemoglobin and myoglobin, the proteins responsible for carrying and delivering oxygen throughout the body. Absorption of iron from vegetable sources can be increased by pairing the greens with lean meat or vitamin C rich foods⁴.

Magnesium is critical for maintaining many bodily functions including that of the nerves, muscles, immune system, heart, bones, and circulatory system. Dark, leafy greens are the most common source of magnesium in the diet⁴.

Calcium is the building block of bones and teeth, in addition to playing a vital role in muscle contraction and relaxation, heartbeat regularity, hormone signaling. Although dairy products are the best way to get calcium, many people's diets are low dairy or dairy-free and leafy greens become an important source of this essential mineral⁴.

Potassium is an essential electrolyte in the body. This means it flows through body fluids carrying an electrical charge, which allows for control of the acidity of blood (pH), amount of water in the body, and muscle function. Potassium is also critical in building proteins, getting energy from carbohydrates, and controlling the electrical activity in the heart⁴.

For information on growing roselle please see the UDC Factsheet #001 Growing Roselle (*Hibiscus sabdariffa*) for Home or Business Production in the Mid-Atlantic (http://docs.udc.edu/causes/Fact_Sheet%20-%20Growing_Roselle.pdf)¹.

For more information on minerals in the diet, please see the USDA National Agricultural Library's Food and Nutrition Information Center's Vitamins and Minerals (<https://www.nal.usda.gov/fnic/vitamins-and-minerals>)³.

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4. Vitamins and minerals. National Agricultural Library. United States Department of Agriculture. <https://www.nal.usda.gov/fnic/vitamins-and-minerals>



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