

The Prevailing Overview of Inorganic Content of Plants

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Editorial

Plants have perpetually remained a beginning of inspiration and vogue of livelihood to humankind since ages. Plant stemmed plus other natural product contributed countless novel bioactive molecules that are available in the market today as medicines or food. Wild edible plants are considered as one of the cheapest sources of energy for human consumption [1]. Every human being requires certain complex organic/inorganic compounds in the diet to satisfy the inadequacy for their liveliness. Amidst the detonation of the human population, speedy urbanization and eternal climatic variations, the farming ranches are fading swiftly leading to the reduction of major crop fertility influencing our daily lives which eventually may induce nutritional deficiency disorders and complications [2].

The inorganic content of plants means residue remaining after incineration of plant material, which represents naturally occurring inorganic salts or adhering to it or deliberately added to it as a form of adulteration. The ash content signifies estimate of the entire volume of minerals present inside a herb or food, whereas the mineral content implies a measure of the amount of specific inorganic elements present within a plant, such as K, Ca, Na and Cl [3]. Plants are the rich source of all the elements vital for human beings. Minerals are needed for advanced body functions. Minerals are inorganic elements and are placed in the soil or in the water which is taken by plants or is utilised by animals [4].

Every constituent works an important function and deficiency of any constituent may lead to abnormal developments in the body. There is a correlation between the element content of the plant and its nutritional status. Minerals are vital in human nourishment, few acts an essential role in bone building, growth, structure formation, reproduction or as components of biologically active molecules others do the crucial part in body sustaining or metabolic and some of the minerals are few enzyme molecules. The important constituents of diet are vitamins, minerals, water carbohydrates, fats and proteins. Ayurveda can be termed as India's monumental heritage and vibrant tradition [5]. Mineral nutrition is important to maintain good health and because of that, determination of As, Ca, Fe, Mg, Na, K, Zn, Ni, Co etc. have been added to Ayurvedic Pharmacopoeia of India. Whereas, heavy metals can also accumulate in the human body above a prolonged period and may create adverse impacts on human health; hence, it is necessary to have a sight on good quality control of medicinal plants to safeguard users from contamination by ingestion [6].

Measurement of the ash and mineral content of plants is crucial for multiple reasons. Which can be obtained for a precise amount of air-dried plant material by exhausting the plant or food material with specific solvents? This parameter is also suitable for the quality control of plant material which has no suitable chemical or biological assay exists. Qualitative or quantitative determination of mineral elements present in plants is important because the concentration and type of minerals present must often be specified on the label of a food. The growth of several microorganisms can be sometimes retarded by the high content of minerals present in food. Some minerals are imperative to a healthy diet (e.g. Phosphorus, Potassium, Calcium and Sodium) whereas some can be virulent (e.g. Lead, Mercury, Cadmium and Aluminium). While food processing, it is necessary to know its mineral content as these controls the physicochemical qualities of food [7]. The most efficient method of fixing the type and concentration of distinct minerals in foods is to employ atomic absorption or emission spectroscopy. Instruments

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Volume 3 Issue 3 **Received Date**: August 06, 2019 **Published Date**: August 22, 2019 **DOI**: 10.23880/ipcm-16000173 based upon this principle can be applied to quantify the undivided range of minerals in foods, usually to concentrations as low as a few ppm [8].

In the conclusion, an attempt is necessitated to highlight numerous plants which may be a good source of minerals to treat many diseases that are mainly originated due to the deficiency of those minerals and can be utilized in Ayurvedic system to cure disease. Determination of inorganic content in plants and food material would be a significant step for the advancement of efficient quality medicines of plants and establishment of quality of foods. This evolving strategy provides us with the successful delivery of diverse natural compounds to the market. Therefore, in current years more emphasis is required on the supernatural existence of inorganic content present in various medicinal plants.

References

- 1. Prasad S, Tyagi AK (2005) Traditional Medicine: The Goldmine for Modern Drugs. Advanced Techniques in Biology & Medicine 108: 90-105.
- Odhav B, Beekrumb S, Akula U, Baijnath H (2007) Preliminary assessment of nutritional value of traditional leafy vegetables in KwaZulu-Natal, South Africa. Journal of Food Composition and Analysis 20(5): 430-435.
- 3. Robin J Marles (2017) Mineral nutrient composition of vegetables, fruits and grains: The context of reports of

apparent historical declines. Journal of Food Composition and Analysis 56: 93-103.

- 4. Hooda PS, Henry CJ, Seyoum TA, Armstrong LD, Fowler MB (2004) The potential impact of soil ingestion on human mineral nutrition. Science of the Total Environment 333(1-3): 75-87.
- 5. Patil RP, Pai SR, Pawar NV, Shimpale VB, Patil RM, et al. (2012) Chemical Characterization, Mineral Analysis, and Antioxidant Potential of Two Underutilized Berries (*Carissa carandus* and *Eleagnus conferta*) from the Western Ghats of India. Critical Reviews in Food Science and Nutrition 52(4): 312-320.
- Rehman NU, Hussain J, Ali L, Khan AL, Mabood F, et al. (2014) Nutritional assessment and mineral composition of some selected edible vegetables. European Journal of Medicinal Plants 4(4): 444-457.
- Layza S Rocha, Daniela G Arakaki, Danielle Bogo, Elaine SP Melo, Nayara V Lima, et al. (2019) Evaluation of Level of Essential Elements and Toxic Metal in the Medicinal Plant *Hymenaea martiana* Hayne Used by Mid-West Population of Brazil. The Scientific World Journal, pp: 1-7.
- 8. Ponmari M, Kamatchi KB (2017) Evaluation of mineral contents in some Medicinal plants used by traditional healers. International Journal of Research in Pharmacy and Pharmaceutical Sciences 2(4): 30-34.

