



Food Processing Impact on Antioxidants Bioavailability and Potential Health Benefits

Villa Roasa*

Department of Food Science & Technology, Aristotle University, Thessaloniki, Greece

DESCRIPTION

Fruits and vegetables are the best sources of antioxidants which are now regularly reported to promote health and quality of life, especially by lowering the risk of chronic degenerative diseases such cardiovascular disease and certain types of cancer. The majority of their protective properties have been related to the existence of bioactive antioxidant molecules, as these substances are believed to prevent cell damage through synergistic interactions.

Despite the fact that fresh fruits and vegetables are frequently consumed, they are also frequently processed into a range of food products, such as juices, pastes, canned foods, etc. These goods may also be beneficial antioxidant sources. However, different processing techniques can significantly affect fruit and vegetable antioxidants, which may therefore have an impact on the final food products' capacity to promote health. It's common for a demand for a certain processing step to have several different sources. For instance, the need to extend life span, the desire to have certain products available out of season, the optimization of products especially suited for home consumption, the development of strategies to design new or alternative food products with modified/supplemented flavour and texture, the preservation or improvement of nutritional properties, and the increase in quality and, consequently, value to generate additional income for the producer. Although the impact of processing on the fate of antioxidants has previously been examined, reports on the extent of their losses or even gains and the influence which processing can have on bioavailability have been reported to differ considerably.

Dietary antioxidants and their health effects the new diet-health paradigm, which emphasises more and more the benefits of our diet, is still generating considerable attention. This has led to nutritional research into the potential health benefits and illness prevention of our foods. Fruits and vegetables have a higher

standing in the human diet as potential "functional foods" as a result of this research. Due to their potentially health-promoting antioxidant contents, these foods are able to offer extra physiological benefits, such as preventing or delaying the onset of a variety of chronic diseases.

Number of health disorders, including cardiovascular failure, some types of cancer, type 2 diabetes, and numerous other autoimmune diseases, as well as and frequently associated with ageing, have been documented as being caused by oxidative stress. The body's release of free oxygen radicals causes this stress. Because they can scavenge free radicals, antioxidants in fruits and vegetables can help to stabilise reactive oxygen species.

Carotenoids, a class of dietary antioxidants found in fruits and vegetables, are among the most extensively studied (i.e. α -carotene, β -carotene, lycopene, etc.) and phenolic compounds epidemiological studies have contributed valuable information in assessing the potential therapeutic properties of foods or food components in illness prevention, even though any potential causal linkages are still contested. A high dietary intake of fruits and vegetables that are rich in carotenoids (particularly β -carotene and lycopene) has been linked to a lower risk of cancer development, which is especially true for forms of stomach and lung cancer, as well as a lower risk of cardiovascular issues. Zeaxanthin and lutein, two other carotenoids, have also been proposed to play a preventative function against the development of specific eye illnesses.

Flavonoids, the major subclass of polyphenols, are commonly found in daily diets. These bioactive substances have received a lot of attention due to their antioxidant properties, which have been found to be strong candidates for preventing human diseases like cancer and cardiovascular conditions as well as some pathological conditions like gastric and duodenal ulcers, allergies, vascular fragility, and viral and bacterial infection.

Correspondence to: Villa Roasa, Department of Food Science & Technology, Aristotle University, Thessaloniki, Greece, E-mail: roasa.villa.lu.ck123@gmail.com

Received: 04-Nov-2022, Manuscript no: JFPT-22-17927, **Editorial assigned:** 07-Nov-2022, PreQC no: JFPT-22-17927 (PQ), **Reviewed:** 21-Nov-2022, QC no: JFPT-22-17927, **Revised:** 28-Nov-2022, Manuscript no: JFPT-22-17927 (R), **Published:** 05-Dec-2022, DOI: 10.35248/2157-7110.22.13.962

Citation: Roasa V (2022) Food Processing Impact on Antioxidants Bioavailability and Potential Health Benefits. J Food Process Technol. 13:962

Copyright: © 2022 Roasa V. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.