



CALL FOR PAPERS

Food Research International

Special Issue - “Stability of phytochemicals during processing”

Phytochemicals are a heterogeneous group of substances found in all plant products and foods and thus constitute an important component of human diets. Consumption of natural, fresh plant produce rich in phytochemicals and antioxidants has been reported protect against some degenerative diseases that affect humans. Evidence for the role of specific phytochemicals in this protective effect is emerging especially with respect to some cancers and heart diseases.

Food and food products undergo processing and storage prior to consumption that could affect nutritional properties by influencing stability of phytochemicals. Therefore much work has been devoted to assessing the effect of processing and storage on levels of potentially important phytochemicals in foods. Minimising changes in phytochemicals during processing is a considerable challenge for food processors and technologists. In addition, industrial adoption of novel processing techniques is in its infancy. Thus, there is a requirement for detailed industrially relevant information concerning stability of phytochemicals and their application in food products. Applications of new and innovative technologies and resulting effects to those food products either individually or in combination are always of great interest to academic, industrial, nutrition and health professionals.

The benefits of phytochemicals have been extensively publicised in the popular press, which has resulted in increased public awareness and interest in consumption of phytochemical-rich foods as a method of enhancing health and well-being. Clinical studies support the role of the plant food phytochemicals as health-promoting functional food components into the human diets. In the last few years, there have been numerous publications in relation to the functional and bioactive compounds obtained from various foods. Phytochemicals from novel sources (food processing by-products) have wide food and nutraceutical applications due to their biological functionality. The focus on the effect of processing (classical and novel) and storage on phytochemicals in a comprehensive way is necessary.

This special issue will focus on the effects of various types of processing on the phytochemicals from the range of foods. This special issue will serve as a comprehensive journal issue for educators, researchers and food processors and product developers providing an up-to-date insight into phytochemicals. The range of processes covered will provide engineers and scientists working in the food industry with a valuable resource for their work. Manuscripts on “*Stability of phytochemicals during processing*” research will be published in a Food Research International special issue in order to make the information easily accessible in one single journal. All the manuscripts within this subject submitted to Food Research International will be peer-reviewed and only high quality and impact manuscripts will be published.

This issue is seeking original, unpublished research and review contributions on stability of phytochemicals during processing including:

- Chemical and biochemical aspects of phytochemicals (e.g. Anthocyanins, Polyphenols, Carotenoids, Polyacetylenes, Glucosinolates etc)
- Changes in nutritional properties of phytochemicals from various sources (e.g. food grains, fruits and vegetables) including changes occurring from farms, during processing to storage.
- Stability of phytochemicals during processing (minimal, thermal, novel thermal and non thermal) techniques including food packaging
- Degradation mechanism, functional properties and food compositional factors influencing the phytochemicals and its antioxidant capacity
- Recent advances in analytical and extraction techniques for phytochemicals
- Novel industrial and nutraceuticals application of phytochemicals
- Mathematical modelling and optimisation studies to preserve major and minor phytochemicals and applicable engineering principles to food products and processes

Submission guidelines:

Authors are invited to submit an original manuscript, short communication or a review paper for publication in a Food Research International special issue dedicated to stability of phytochemicals during processing.

Please refer to the journal's Guide for Authors for specific advice on how to prepare a paper (<http://www.elsevier.com/locate/foodres>). Papers must be submitted electronically via the Elsevier Editorial System (EES) site for the Journal - <http://ees.elsevier.com/foodres> - beginning in July 2010 (select Special Issue: Stability of phytochemicals during processing). Closing date for submissions is December 10th, 2010. Inquiries regarding the content of papers may be submitted to Brijesh Tiwari (b.tiwari@mmu.ac.uk or brijeshkumartiwari@gmail.com).

Timelines:

July 2010: Beginning of paper submission

December 15, 2010: Deadline for paper submission

August 2010-January 2011: Peer-review process

September 2010-February, 2011: Revised manuscript due

March 2011: Publication