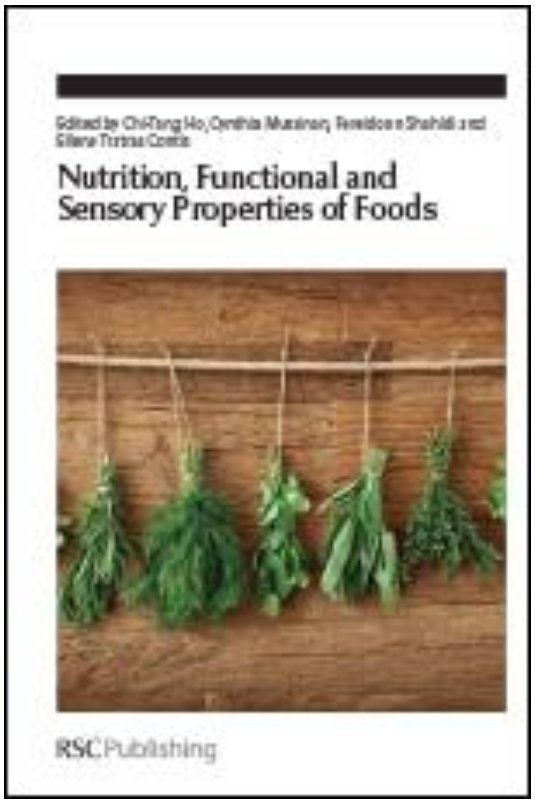

Synopsis

The link between nutrition, food and health is well established and the global interest in these areas generates new information every day. This book pulls together the latest research on flavour chemistry and nutritional and functional properties of food.

Topics covered in flavour chemistry begin with an overview of the analysis, occurrence and formation mechanism of furan, a food-borne carcinogen, then focuses on analysis of melamine, the uses of enzymes to modify flavours of wines and protein as a process flavour precursor and finally includes information on the volatile compounds in an array of food products and ingredients such as coriander, chamomile, saffron and dry fermented sausage.

Coverage in the nutritional and functional properties of food section is wide range and includes reviews of the hot topics such as the metabolism of dietary phenolic acids, the use of emulsions for the oral delivery of bioactive phytochemicals and the impact on epigenetics in cancer prevention. Written by international experts in the field and edited to a high standard, this title will provide a unique reference for researchers and other professionals in the industry and academia, particularly those directly involved in food science.

Nutrition, Functional and Sensory Properties of Foods

The link between nutrition, food and health is well established, but new information is being generated every day. This book pulls together the latest research on food and flavours as well as covering food functionality the molecular biology and delivery systems, for example encapsulation and flavour release. Written by experts in the field and edited to a high standard, this title will provide a unique reference for researchers and other professionals in the industry and academia, particularly those involved directly in food science.
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Effect of Enzyme Treatment on Volatile Profile of White and Red Wines from Macedonia by using HS-SPME-GC/MS

Sanja Kostadinović Veličkovska, Sebastian Tolle, Recep Goek, Goran Milanov and Peter Winterhalter
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The flavor of white wines is due to a complex mixture of many volatile compounds. These compounds have distinct physicochemical properties regarding, for example, polarity, volatility and odour impact. In this study, for isolation of free and glycosidically-bond volatile compounds, a head space solid-phase microextraction (HS-SPME) procedure was applied for sample preparation of white and red wines from Macedonia followed by separation and identification with GC-MS. Separation of the compounds was performed on a Carbowax column after the injection of the CRB-DVB-PDMS fiber in splitless mode. The liberation of the glycosidically-bond volatiles was perform by application of enzyme “Endozyme Aromatic” for “Temjanika” and “AR 2000” for the rest of examined wines. The main gropes of volatile compounds in Temjanika and Muscat wines produced from Muscat de Frontignan grape variety were terpenes especially limonene, p-cymene, linalool, gernaiol, citronellol and for other wines produced from red grape variety such as Vranec and Merlot, the most abundant compounds were alcohols, esters and fatty acids. Statistical analyses confirmed that the effect of enzymatic treatment for the examined wines was more significant than the varieties of grapes from which the wines were produced.