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Phenolic antioxidants in plant-derived foods

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Phenolic compounds are constituents of many fruits, vegetables and other plant-derived foods, and they have attracted a great deal of public and scientific interest because of their potential anti-carcinogenic, antibacterial, anti-inflammatory and other health-promoting effects as antioxidants and free radical scavengers. A number of epidemiological studies have given evidence that consumption of fruits and vegetables is correlated with reduced incidence of and mortality from cancer, cardiovascular and neurological diseases. The protection that fruits and vegetables provide against these diseases has been attributed to the poly-phenolic and other antioxidant phytonutrients contained in these foods. Therefore, it is important to isolate, identify and quantify poly-phenolic compounds and their bioavailability in order to understand their critical roles in human health. In this presentation, the speaker will first report on the progress of the separation, identification and measurement of polyphenols in various fruits, vegetables, traditional Chinese medicines, tea and other plant-derived foods in the past decade, mainly by GC, GC-MS, HPLC, HPLC-MS, CE, and CE-MS; then further discuss the antioxidant, free-radical scavenger and anticancer capacity of polyphenols and finally focus on the bioavailability including absorption, subsequent distribution, metabolism and excretion of polyphenols in human fluids.

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Authentication of FSMS implementation & certification: A challenge

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Food Safety Management System (FSMS) is a complete food safety assurance system as it maps out what a food business operator needs to do to demonstrate its ability to control food safety hazards in order to ensure that food is safe for consumer. But, FSMS successful achievement through real implementation is a big question mark on the performance of both food business operator and the certification body. There are many FSMS requirements that are overlooked during both the phases of FSMS implementation and verification. There is a need of statutory and regulatory authorities' contribution towards the authentication of FSMS implementation and verification system by developing a policy that shall ensure the food safety at all levels. The issue raised, deserves research in relation with a global data based analysis of the FSMS certification worldwide phenomenon. The purpose is to produce both qualitative and quantitative analysis, in order to categorize the level of FSMS implementation and certification among food companies and certification bodies respectively.

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