

21st International Conference on

Food & Nutrition

July 25-26, 2018 | Vancouver, Canada

Bioactive compounds in wheat germ oil for lipid profile management

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From several years, the beneficial effects of vegetable oils in the human diet have been well known, basically due to their high content in unsaturated fats, natural antioxidants and their high energy value. Also of major importance, wheat germ, obtained from milling process as a by product, is one of the sources with the high oil content. It contains about 11-12% oil. Wheat germ oil is of extreme importance due to its high content of polyunsaturated fatty acids, bioactive compounds like octacosanol, phytosterols and particularly tocopherols. Feeding experiments in various animal species and humans have highlighted the beneficial role of these bioactive constituents to health. The healthy composition of wheat germ oil has promising effect on the lipid profile of animals and humans. The tocopherols present in wheat germ oil are able to scavenge free radicals and afford an adequate protection against peroxidation. Regarding the heart, tocopherol and octacosanol present in Wheat germ oil decreases the plasmatic levels of LDL-cholesterol and increases those of HDL-cholesterol, hence diminishing the risk of suffering from heart complaints. In this context, it has been suggested that increased consumption of wheat germ oil will render circulating lipoproteins less sensitive to peroxidation and thereby diminish the development of coronary heart disease.

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