



TECHNOLOGY

Modified Process for Isolation and Purification of Lutein from Marigold Flowers

OVERVIEW

Numerous epidemiological studies have shown that consumption of substantial amounts of fruits and vegetables reduce the risk of cancer. The anti cancer activity is believed to be caused by the carotenoids in the food which act as antioxidants. Most earlier studies were conducted with b carotene as an antioxidant. Recent evidence suggests that lutein, an abundant carotenoid in the diet and blood, could also act as an antioxidant and, thus, could be useful in the reduction of the incidence of cancer. In addition, lutein and its isomeric compound zeaxanthin are the only two compounds among 40 carotenoids found in fruits and vegetables that are accumulated in the human macula by means of the circulating blood. The compounds play an important role in prevention of an eye disease called Age-related macular degeneration. The presence of lutein and zeaxanthin at high concentrations in the retina and lenses also imply their role in prevention of cataracts.

A researcher at the University of Maryland College Park, Department of Chemistry and Biochemistry has developed an economically viable extraction technique which is superior to all existing technology for the purification of lutein from marigold flowers. The extraction procedures have been simplified and use mild separation conditions which prevent degradation of lutein. Additionally, toxic organic solvents during the purification steps have been eliminated making lutein safer to use as a food supplement for humans.

For additional information please contact the Life Sciences Technology Manager, Office of Technology Commercialization, University of Maryland, College Park, MD 20742. Phone (301)405-3947. E-mail: otc@umd.edu.

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Available for exclusive license

CATEGORIES

- Natural Compounds

EXTERNAL RESOURCES

- [US Patent 7,173,145](#)

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