



Natural Food Coloring from Mangosteen (*Garcinia Mangostana* Linn)

TECHNOLOGY DESCRIPTION

This technology is a method to produce functional food coloring using anthocyanins from the pericarp of mangosteen.

TECHNOLOGY FEATURES

This technology is optimized with pretreatment steps combined with spray-drying microencapsulation. The coloring produced can be used in beverage industry, nutritional supplements and cosmetic or topical industry. Polyphenoloxidase of the mangosteen pericarp is thermo stable and requires combined treatment of both thermal and chemical to complete enzyme inhibition.

ADVANTAGES

- Original food coloring produced from edible fruits
- Does not contain dangerous chemicals
- Rich in antioxidants which are beneficial to health
- Provides alternative, health- based food coloring to a wide range of industries (cosmetic, beverage, nutritional supplement and herbal drink)

INDUSTRY OVERVIEW

Prospect Industry: Local and global market for functional food ingredients

This new food coloring made of mangosteen may see its potential market in both local and global market for food ingredients in the functional food industry. Globally, functional food and beverage sales was \$118 billion in 2012, the market was expected to grow at a CAGR of 5.21 percent over the period 2013-2018. Four largest functional food/drink markets in the world are: USA (\$27.8 billion), Japan (\$22 billion), England (\$8.08 billion), Germany (\$6.4 billion). In Malaysia, the general food and beverage market is estimated at RM30 billion; and trade sources estimated functional foods consist of 40% of total processed and retail packed food and drinks markets (Stanton et al., 2011).



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