



EXOTIC ICE STRUCTURING PEPTIDES

TECHNOLOGY DESCRIPTION

This technology is a method to produce non allergenic antifreeze peptide found in Antarctic yeast, *Glaciozyma antarctica* which have high antifreeze activity and recrystallization inhibition.

TECHNOLOGY FEATURES

This peptide is capable of being prepared in large quantities at a low cost, replacing toxic chemical antifreeze reagent. It can be stored in tropical climate which will lessen the damage and saves energy. This technology will also increase the production rate with a longer shelf life and frost protection. The peptide is heat stable and can be pasteurized and mixed in formulation. It can be used to enhance food texture and freeze tolerance as well as improving the fresh and frozen meat quality. It is also can be used in cryopreservation of organ transplant and long term storage for sperm, embryo and blood cells.

ADVANTAGES

- Tropical storage climate
- Increase production rate
- Heat stable

INDUSTRY OVERVIEW

Prospect: Frozen Food Manufacturers and suppliers

Antifreeze peptides are widely used in frozen food industry. Consumer shift towards adoption of food requiring less time to prepare is expected to remain a key driving factor for the global frozen food market. The global frozen food market is expected to reach USD 307.33 billion by 2020. Europe was the largest regional frozen food market and accounted for 38.9% of total market revenue in 2013. The Asia Pacific region is expected to grow at an estimated CAGR of 4.8% from 2014 to 2020. In Malaysia, the total market size of chilled and frozen foods is estimated at RM10 billion (including exports) in 2013. Greater growth will be constrained by marginally positive growth in consumption of frozen processed red meat rising from consumer's health awareness and also restriction in religion.



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