

Wheat proteins for ice cream

Ice-modifying proteins extracted from winter wheat may help ice cream stay smooth and creamy during long periods in the freezer, suggests new research by Mr. Douglas Goff, a food scientist at the University of Guelph, Canada. Ice cream gets its creamy texture from the way fat molecules, air bubbles and ice crystals are assembled within highly concentrated sugar-water mixture. Getting this assemblage right is not an easy task, according to Mr. Goff.

Ice cream is an emulsion and hence, the matrix of fat particles must be stabilized by milk proteins to prevent the fat from clumping together. The other component of the emulsion is sugar-water solution – from which the ice crystals form during freezing – which never freezes completely, allowing ice cream to be scooped and chewed at freezer temperatures. While investigating new ways to improve ice cream quality by manipulating its structure and introducing new ingredients, Mr. Goff discovered the use for certain proteins in winter wheat. The research was done in collaboration with Ice Biotech Inc., which developed and patented the proteins. Use of these proteins in ice cream has made the product “really smooth”, said Mr. Goff. *Contact: Ms. Monica Amarelo, American Association for the Advancement of Science, United States of America. Tel: +1 (617) 236 1550; E-mail: mamarelo @aaas.org. (Website: www.globaltechnoscan.com)*