
Shelf Life of Chocolate and Compound Coatings

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Chocolate and compound coatings are used in the confectionery industry to give finished products the desirable characteristics of taste, appearance and texture which consumers demand. Coatings are hard to the touch but melt rapidly in the mouth, delivering the expected chocolate taste. They are also richly colored and glossy, giving products an attractive appearance. These attributes bring value to confectionery products. The knowledge of how to produce and maintain these qualities is important in ensuring consumer satisfaction.

The purpose of this paper is to discuss the factors which impact the appearance and texture of chocolate and compound coatings, so confectionery manufacturers can gain the maximum shelf life from their products. Only by understanding the underlying principles of coating technology can the best performance be achieved.

Coatings consist of sugar or other permitted sweeteners, ground cocoa nibs or liquor, cocoa powder, milk powder, nonfat

dry milk powder, emulsifiers, flavoring agents, salt, lecithin and fat. In chocolate, this fat is always cocoa butter with or without milk fat, while in compound coating the fat could be a vegetable fat or a mixture of vegetable fat with cocoa butter and milk fat.

While the solids ingredients such as sugar, milk solids and cocoa solids deliver much of the flavor contribution in a coating, it is the fat phase of the coating and its processing which determine the texture, melting behavior, flavor release and stability of the coating with respect to temperature and time in its final application on a confectionery product. This is due to the structure of the coating, which is a suspension of sugar, cocoa and milk solids finely dispersed in a continuous fat phase. The texture of the coating is therefore determined by the nature of the fat phase, which needs to melt and release flavor components during the mastication process.

To study the shelf life of chocolate and compound coatings it is therefore nec-

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