

ICE-CREAM & FROZEN DESSERTS



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Module 2. Definitions, classification and composition of ice cream and other frozen desserts (as per FSSAI)

Lesson 3

DEFINITION OF ICE CREAM AS PER FSSA (2006). CLASSIFICATION OF ICE CREAM-I, PLAIN, FRUIT AND NUT, CHOCOLATE, ICE LOLLIES, CANDIES, KULFI & MALAI-KA-BARAF

3.1 Introduction

Ice cream is a frozen dairy product made by suitable blending and processing of cream and other milk products, together with sugar and flavour, with or without stabilizer or color, and with the incorporation of air during the freezing process.

3.2 Definition

According to the FSSA (2006), Ice Cream, Kulfi, Chocolate Ice Cream or Softy Ice Cream (hereafter referred to as the said product) means the product obtained by freezing a pasteurized mix prepared from milk and /or other products derived from milk with or without the addition of nutritive sweetening agents, fruit and fruit products, eggs and egg products, coffee, cocoa, chocolate, condiments, spices, ginger and nuts and it may also contain bakery products such as cake or cookies as a separate layer and/or coating. The said product may be frozen hard or frozen to a soft consistency; the said product shall have pleasant taste and smell free from off flavour and rancidity; the said product may contain food additives permitted in these regulation including Appendix A; the said product shall conform to the microbiological requirements specified in Appendix B; the said product shall conform to the following requirements, namely:—

Requirement	Ice Cream	Medium Fat Ice Cream	Low Fat Ice Cream
(1)	(2)	(3)	(4)
Total Solid	Not less than 36.0 percent	Not less than 30.0 percent	Not less than 26.0 percent
Wt/Vol (gms/l)	Not less than 525	Not less than 475	Not less than 475
Milk Fat	Not less than 10.0 percent	More than 2.5 percent but less than 10.0 percent	Not more than 2.5 percent
Milk Protein (Nx6.38)	Not less than 3.5 percent	Not less than 3.5 percent	Not less than 3.0 percent

Note: In case where Chocolate, Cake or similar food coating, base or layer forms a separate part of the product only the Ice Cream portion shall conform to the requirements given above. The type of ice-cream shall be clearly indicated on the label otherwise standard for ice-cream shall apply.

3.2.1 Classification of ice cream

Depending upon the commercial practices followed, the following classifications are used for different groups of ice cream and frozen products.

3.2.2 Plain ice cream

An ice cream in which the total amount of the colour and flavouring ingredients is less than 5% of the volume of the unfrozen ice cream. Examples are vanilla, coffee, maple and caramel ice cream.



3.2.3 Chocolate

Ice cream flavoured with cocoa or chocolate. It usually contains higher sugar content *viz.*, 16 to 17%, about 2.5 to 3.5% of cocoa and stabilizer and emulsifier. Other variants of chocolate frozen product includes chocobar (where chocolate acts as a couverture), chocolate frosties (chocolate layer containing crispies), chocohips.



3.2.4 Fruit

Fruit Ice cream is made by adding various fruits at the time of freezing with or without additional fruit flavouring or colour. The fruits may be fresh, frozen, canned or preserved.



3.2.5 Nut

Ice cream containing nut meats, such as almonds, pistachio or walnut, with or without additional flavouring or colour.



3.2.6 Ice Milk / Milk Ice

A product similar to ice cream containing 2 -7% fat and 12-15% MSNF, sweetened, flavoured and frozen like ice cream.



3.2.7 Ices

Made of fruit juices, sugar and stabilizer with or without additional fruits, color, flavouring or water and frozen to the consistency of ice cream. Usually contains 28 – 30% sugar, 15-20% overrun, and no dairy products.

3.2.8 Sherbets

Sherbet is a product made of fruit juices, sugar, stabilizer, and milk products. It is similar to anise, except milk, either whole, skim, condensed, or powdered, or ice cream mix, is used in place of all or part of the water used in ices, sherbet contains 1-2% milk fat.

3.2.9 Sorbets

The composition of sorbets is similar to that of ices. Sorbets have a high sugar and fruit and fruit juice content (30,30 and 50% respectively). Stabilizer and egg white are also added, and the product has an overrun of 20% or less. Exotic flavours are often included in sorbets.



3.2.10 Mousse

Ice cream containing whipped cream, sugar, colour and flavouring, and frozen without further agitation. Sometimes condensed milk is added to give better consistency



3.2.11 Bisque

It is made by the addition of grape, nuts, macaroons, sponge cake or other bakery products with appropriate flavourings.

3.2.12 Custards

Custard is ice cream cooked to custard before freezing. Frozen custards are also known as French ice cream or French custard ice cream. It contains whole egg or egg yolk in such a proportion that the total egg yolk solids should not be less than 1.4% of the weight of the finished frozen custard or less than 1.12% for bulky flavored products. Parfait is frozen custard with high fat content.



3.2.13 Cassata

This is made in a round mold, hinged so that it may be filled with ice cream and other frozen products. The confection is built up in layers of rich, variously flavoured ice cream, some with fruits, some with liqueurs, and sometimes with chocolate or nuts. Fingers or slices of sponge cake, sometimes soaked in liqueur, may be added. The cassata is frozen for several hours, and then turned out of the mold for serving.



3.2.14 Variegated or rippled ice cream

Variegated ice cream is produced by injecting approximately 10% of a prepared base into the ice cream. Most popular flavours of variegated ice cream are chocolate, butter scotch, strawberry, pineapple and caramel.

3.2.15 Novelties

An ice cream novelty is defined as a unique single-serve portion – controlled product. Novelties include special combinations of ice cream with flavour and confections, cup items, and fancy molded items. They are usually produced by either extrusion or molding, and examples include coated ice cream bars (e.g. Mars), Coated ice cream bars on a stick (e.g. Magnum), ice cream cake, and ice cream logs (e.g. Vienetta), ice cream sandwiches, popsicles and fudgesicles.

3.2.16 Puddings

Ice cream containing a generous amount of mixed fruits, nut meats, and raisins, with or without

liquor, spices or eggs.

3.2.17 Fanciful-name ice cream

These products usually do not contain a single characterizing flavour, but the flavour is due to the mixture of several flavouring ingredients. Two or more distinct flavours in the same package.

3.2.18 New york or philadelphia

This is generally a plain vanilla icecream with extra colour for Philadelphia and extra fat and eggs for New York Ice Cream.

3.2.19 Rainbow ice cream

It is prepared by carefully mixing six or more different coloured Ice Creams as they are drawn from the freezers to give a rainbow coloured effect when the product is hardened.



3.2.20 Fancy moulded ice cream

It is moulded in fancy shapes and composed either of one colour and flavour of Ice Cream or a combination of colours and flavours or especially decorated.

3.2.21 Mellorine type products

Mellorine is a product similar to icecream in which the butter fat has been replaced by a suitable vegetable or animal fat.

3.2.22 Soft serve ice cream

Soft serve ice cream is a type of frozen dessert that is similar to, but softer than the ice cream. These products are sold as drawn from the freezer without hardening. It is generally lower in milk fat (3.6%) than ice cream (10-18%) and produced at a temperature of about -4°C compared to ice cream, which is stored at -15°C. A warmer temperature of soft serve ice cream allows the taste buds to detect more flavour. The air introduced into soft serve ice cream may vary from 0-60% of the volume of the finished product. The ideal acceptable air content is between 33 and 45% of volume.

The premix for soft serve can be obtained in several forms

1. Fresh liquid that requires constant refrigeration until needed. It can be stored for 5 to 7

days before spoiling by bacterial contamination

2. **A powdered mix:** This is a dried version of liquid mix. It has several advantages of easy distribution and can be stored for longer periods of time without spoiling. Water must be added prior to being churned and frozen.

3. **UHT-Mix:** It is a liquid that has been sterilized and packed in sealed, sterile bags. It can last for a very long time without refrigeration and can be poured into the soft serve freezer immediately upon opening.

All these should be refrigerated to 3°C prior to use to avoid bacterial contamination and spoilage.

3.2.23 *Kulfi*

Kulfi is an indigenous frozen milk product. The method of manufacture of kulfi varies widely. The conventional method of kulfi making consists of boiling of milk, addition of sugar, concentration of milk to 2:1 level and addition of khoa, malai, flavour etc. to the concentrated cooled milk. Kulfi mix is then filled into metallic cones and the top of the cone is covered with a lid. The mixture in the moulds is frozen in large earthen vessels containing ice – salt mixture in the ratio of 1:1.



3.2.24 *Malai-ka-baraf*

This term is applied to a variety of frozen product in which sweetened milk or malai may form the chief ingredient.

Last modified: Wednesday, 19 December 2012, 03:27 PM

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