

LU
5655
A762
no. 502
c. 2



Dairy Guidelines

COOPERATIVE EXTENSION SERVICE, V.P.I., BLACKSBURG, VIRGINIA

Series 502 - October 1966

HOMEMADE FROZEN DAIRY DESSERTS

G. J. Nageotte, Associate Extension Dairy Specialist
P. M. Large, Assistant Professor, Dairy Science

Introduction

VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY LIBRARIES

When ice cream was first made is not known. Its development into the high-quality product that we have today is the result of an evolutionary process. It began with cooling beverages by using snow from the mountains in southern Europe. Later, it was discovered the beverages could be frozen by packing snow and salt around the container. This frozen product resembled our water ices of today. As time went on, recipes were developed which contained milk or cream.

The classification of various products associated with frozen dairy desserts includes:

1. Ices are made of fruit juice, sugar, and stabilizer (with or without additional fruit acid, color, flavoring, or water) and frozen to the consistency of ice cream. They contain no milk or milk solids. A frappe is an ice that has been frozen to a slushy consistency and served.
2. Sherbets are made of the same ingredients as ices, except that milk, cream, or ice cream mix is used in place of part or all the water used to dilute the fruit juice.
3. Ice creams are made by combining various dairy products with sugar and stabilizers. They contain a much greater concentration of milk solids and a smaller percentage of sugar than sherbets. Plain commercial ice cream must contain at least 10% butterfat. Ice cream containing bulky flavor ingredients such as chocolate, fruits, and nuts must contain at least 8% butterfat.
4. Ice milk is a product containing the same ingredients as ice cream except the butterfat content may vary between 2 and 7%.

Directions for Making Vanilla Ice Creams

Homemade ice creams may be frozen in a dasher freezer or in the home refrigerator or freezer. The basic recipes differ according to the method of freezing. Generally, mixes frozen in the home refrigerator or freezer require higher freezing temperatures which cause the formation of smaller ice crystals. The use of less sugar will accomplish this.

The most popular homemade ice cream is made with a custard base. The recipes given for each method of freezing include eggs.

For Dasher Freezer (will make about 2 quarts)

1 tsp. gelatin	2 cups milk
1 cup sugar	1 qt. thin cream or 2 cups heavy cream plus 2 cups milk
$\frac{1}{2}$ tsp. salt	1 tbsp. vanilla extract
2 tbsp. nonfat dry milk	
2 eggs slightly beaten	

1. Add gelatin to cold milk, let soak for 5 minutes; then scald milk in double boiler until gelatin is dissolved.
2. Mix together sugar, salt, and nonfat dry milk and add to beaten eggs.
3. Pour in the scalded milk, stirring constantly. Cook in double boiler over boiling water, stirring constantly, until mixture coats spoon (about 5 minutes). Cool by setting pan in container of ice water.
4. Add cream and vanilla. (If the cream is not smooth, strain it through a fine sieve.)
5. Make sure freezer is working properly by giving it a few turns while it is empty.
6. Pour the mixture into the freezer container. Do not fill the container more than $\frac{2}{3}$ full. This will allow for expansion when the mix is frozen and air is incorporated. Insert the dasher and put on the cover.
7. Surround the container with alternate layers of crushed ice and rock salt, using 6 parts of ice to 1 part of salt.
8. Turn crank slowly for 3 or 4 minutes, then turn it rapidly until the mixture is stiff and almost impossible to turn.
9. Remove cover carefully. Lift out dasher and scrape the ice cream down into the can with a spoon.
10. Cover the top of the ice cream container with waxed paper, replace the cover, and cork up the hole in it.
11. Drain off melted ice and pack in alternate layers of 4 to 6 parts of ice to 1 part of salt. Cover whole freezer with old piece of carpet, burlap sacks, or newspapers to retard the melting of ice.
12. Allow the ice cream to stand for 2 to 3 hours to ripen and mellow. If necessary, drain off melted ice and repack in same proportion as in step 11.

For Refrigerator or Home Freezer (This amount fills 1 tray, making a little less than 1 quart)

1 cup milk	2 eggs
1 tsp. gelatin	$\frac{1}{8}$ tsp. salt
$\frac{1}{2}$ cup sugar	1 cup heavy cream, whipped
1 tbsp. nonfat dry milk	$1\frac{1}{4}$ tsp. vanilla

1. Add gelatin to cold milk, let soak for 5 minutes; then scald milk in double boiler over boiling water, stirring until gelatin is dissolved.
2. Separate eggs. Beat egg yolks slightly.
3. Mix nonfat dry milk with sugar and add this mixture to the egg yolks. Gradually pour in scalded milk, stirring constantly. Return the mixture to double boiler and cook over boiling water, stirring constantly, until the mixture thickens slightly and coats the spoon.
4. Chill the mixture by setting the pan in a container of ice water. Mixture should thicken.
5. Add salt and vanilla to egg white and beat until stiff. Fold into chilled custard mixture. Fold in whipped cream.
6. Pour into freezing tray with grids removed, filling no more than 3/4 full to allow room for subsequent mixing.
7. Set the refrigerator temperature control to its lowest cooling point, as the faster the mixture freezes, the better its consistency will be. (If using a home freezer, do not alter the control.)
8. When the mix has partially frozen until there is a 1/4" thick frozen layer on the sides and bottom of the tray, remove the tray from the freezing compartment and pour the mixture into a well-chilled bowl. Beat with an egg beater until the mixture is smooth. You may beat it with a fork in the refrigerator tray if you are careful to scrape all traces of the frozen mixture off the sides and bottom of the tray and beat the mixture until smooth.
9. Return the tray of mix to the freezing compartment and freeze for an additional 30 minutes (20 minutes in the home freezer).
10. Remove from the freezing compartment and, using a fork, scrape all the frozen mix off sides and bottom of the tray. Beat thoroughly with the fork until the mix is smooth again. Thorough beating gives refrigerator ice cream a smooth texture.
11. Return to the freezing compartment and freeze until firm.
12. When the ice cream is frozen stiff, the temperature control may be turned halfway back toward the normal setting while the cream ripens and mellows for an hour or longer. Watch carefully, however, to see that it does not start to melt. If it does, turn the temperature down again.

Additional Recipes for Frozen Dairy Desserts

Ice Cream Recipes

(makes about 2 quarts)

No. 1

5 cups medium cream
1 cup sugar
2 tsp. gelatin
2 tbsp. nonfat dry milk
Flavor to taste

No. 2

3 cups light cream
2 cups skim milk
1 cup sugar
2 tsp. gelatin
2 tbsp. nonfat dry milk
Flavor to taste

No. 3

3 cups medium cream
1 cup whole milk
1 cup evaporated milk
1 cup sugar
2 tsp. gelatin
Flavor to taste

No. 4

4 cups medium cream
1 cup sugar
3 eggs (beaten)
2 tsp. gelatin
2 tbsp. nonfat dry milk
Flavor to taste

Flavorings for Ice Cream

Any of the following flavors may be added to any one of the recipes given above:

1. Chocolate - Make a chocolate syrup by mixing $1\frac{1}{4}$ oz. cocoa, $2\frac{1}{4}$ oz. sugar, and 4 oz. water. Heat to boiling and cool. Add to mix prior to freezing.
2. Fruit and nut - Add chopped nuts or crushed fruit, either fresh, frozen, or canned to suit the taste. Add these at any time during the freezing operation.
3. Caramel - Substitute $\frac{1}{2}$ cup sugar and $\frac{1}{2}$ cup caramel syrup for the 1 cup sugar given in the above recipes.
4. Macaroon - Add about 2 cups macaroons, measured after drying and crushing. Grape-nuts or dried sifted cake crumbs may be used in place of macaroons.

Ice Recipes

(makes about 2 quarts)

Lemon Ice

4 cups water
2 cups sugar (or less to suit taste)
 $\frac{3}{4}$ cup lemon juice
1 tsp. gelatin

1. Make syrup by boiling the water and sugar for 1 minute or more. Cool.
2. Add gelatin to small amount of cold water. Dissolve by heating in double boiler. Cool.
3. Mix syrup, strained lemon juice, and dissolved gelatin and freeze.

Two cups of orange juice or 2 cups of raspberries, strawberries, or blueberries may be substituted for the lemon juice in the formula given above.

Sherbet Recipes

Using the above ice recipe, substitute $1\frac{1}{2}$ cups of milk for the same amount of water to make a sherbet.

Ice Milks

Substitute the same amount of milk for cream in any of the recipes given for ice cream. In addition, add 2 tbsp. nonfat dry milk to the recipe to improve the body of the finished product.