PERFECT CAKES AND COOKIES
EVERY TIME

Reference Material

Definitions of Types of Cakes and Cookies
Baking Techniques, Step-by-Step
Tested Recipes for Perfect Cakes and Cookies
Standards and Score Card for Judging Cakes
Causes of Common Defects in Cakes
HOW TO USE THIS BOOK

I. For Class Discussion

a. Definitions of the types of cakes and cookies. (page 2)

b. Quality standards for cakes and cookies. (page 6)

c. Causes of common failures in cakes. (page 8)

d. The processing of evaporated milk and the advantages of evaporated milk that result from processing. (page 9)

II. For Laboratory Work

a. Explanation of baking techniques for perfect cakes and cookies. (page 3)

b. Directions for Making Cakes and Cookies and Temperature Guide for baking. (pages 4-5)

c. Judging cakes containing fat with sample score sheet. (page 7)

d. Tested recipes for cakes, cookies and frostings. (pages 10-16)

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Back in the 16th century, when New York was still a wilderness, England was beginning to develop the fine art of cake baking. By Colonial times, there was no higher evidence of good housekeeping than the baking of a perfect cake.

In the old days, most cakes resembled a yeast bread enriched with eggs, sugar and fruit. Baking a cake was an important event and required the work of the entire domestic household. These cakes were huge in size. Flour was measured by the peck, other ingredients by the pound and eggs by the dozen. Since sugar came in large hunks, it took hours to blend it with the butter. And beating two or three dozen eggs was quite a task.

Recipes for cakes were carefully cherished and handed down as a prized heritage from one generation to another. Sometimes they were in manuscript form, but more often the ingredients were simply memorized and passed along by word of mouth.

Today, there are many kinds of cakes, with specialized ingredients such as cake flour and baking powder, and established techniques and rules to follow for good results every time. Recipes for delicious cakes, which require a minimum of work, have been developed and approved by experts. Fine cakes are still the mark of a good cook, but recipes are no longer written in complicated manuscript form, or trusted to memory. Instead, books like PERFECT CAKES AND COOKIES EVERY TIME are written to make it easy for everyone to bake a good cake.

### Introducing the Different Types of Cakes and Cookies

#### Cakes

I. Cakes with fat
   - "Butter" Cake contains butter or some other fat and a chemical leavening agent.
   - Chiffon Cake contains cooking (salad) oil.
   - Pound Cake, based on the old recipe, contains 1 pound each of butter, sugar, eggs and flour. The cake is leavened by the air incorporated during creaming and in the beaten eggs, and the steam created during baking.

II. Cakes without fat
   - These cakes are made without fat, baking powder or soda. They are leavened by air that is beaten into the eggs, and steam that forms within the cake during baking. Sponge cakes are usually baked in tube pans which permit the heat to come up through the center of the cake and bake it quickly enough to utilize the leavening power of the eggs. Sometimes they are baked in shallow layers as for Boston Cream Pie or in sheets for use as a jelly or cream roll.
     - Angel Food or White Sponge contains only the whites of the eggs.
     - Yellow or True Sponge is prepared with both the whites and yolks of eggs. (Jelly Roll in this book is a sponge-type cake modified to include baking powder and milk.)

#### Cookies

- **BAR COOKIES** are made from stiff batter put into a flat pan and cut into bars after baking.

- **DROP COOKIES** are made from soft dough dropped from a teaspoon on a lightly greased cookie sheet and baked quickly in the oven.

- **MOLDED COOKIES** are made from stiff dough rolled with the hands into balls or long, pencil-thick rolls; then flatten or shape as directed.

- **PRESSED COOKIES** are made of dough that is slightly stiffer than Drop Cookie dough. It is soft enough to hold the shape of the cookie.

- **REFRIGERATOR COOKIES** are made from stiff, rich dough. They are shaped into a long thick roll, chilled and kept in the refrigerator ready to be sliced with a sharp knife and baked as needed.

- **ROLLED COOKIES** are made from dough stiff enough to roll thin with a rolling pin. Before baking they are cut into the desired shapes with a floured cookie cutter.
THE STEPS TO PERFECT CAKES AND COOKIES

PLAN YOUR BAKING BEFORE YOU START

1. Use a tested recipe.
2. Read the recipe carefully -- be sure you understand it perfectly.
3. Collect all utensils and equipment necessary.
   a. Be sure to use the type and size of baking pans specified in the recipe. If cake pan is too small, the cake may fall during the baking. If cake pan is too large, the batter will not be deep enough in the pan. This will cause the cake to be dry and the texture less fine.
   b. Cookies should be baked in shallow pans to insure even browning. Cookie sheets should be small enough to allow the heat to circulate in the oven. If the cookie sheet is too large the oven heat may be trapped beneath the pan causing uneven browning.
   c. Prepare baking pans according to directions in the recipe.
4. Turn on oven and set at temperature specified by the recipe.
5. Assemble all ingredients needed.

MEASURE ACCURATELY

1. Use standard measuring cups and a set of standard measuring spoons. They must conform to the specifications given by the United States Bureau of Standards which are:
   a. A standard measuring cup for measuring wet ingredients is an accurate half-pint measure. It is grooved on one side to read 1/4, 1/2, 3/4 and 1 cup. On the other side are grooves to show 1/3, 2/3 and 1 cup.
   b. Standard measuring cups for measuring dry ingredients consist of 4 separate cups -- which hold 1 cup, 1/2 cup, 1/3 cup and 1/4 cup each. They do not have extensions above the 1, 1/2, 1/3 or 1/4 cup measure nor do they have lips. This makes it possible to obtain level measurements.
   c. Standard measuring spoons include 1 tablespoon, 1 teaspoon, 1/2 teaspoon and 1/4 teaspoon. The tablespoon holds 3 level teaspoons.

2. All measurements should be level. Even a small variation in the amount of an ingredient can change the balance of a recipe enough to cause poor results.
   a. Sift flour; then lightly spoon it into the cup and level with a straight-edged knife. Never shake flour down or tap cup on a table. This causes the flour to "pack" -- so that too much flour is incorporated making the finished product dry and heavy.
   b. Sift granulated sugar if it is lumpy. Spoon it into the measuring cup and level with a straight-edged knife.
   c. Pack brown sugar into a cup just firmly enough for the sugar to keep the shape of the cup when turned out. Level with a straight-edged knife.
   d. Press shortening firmly into the measuring spoon or cup, and level with a straight-edged knife.
   e. Measure liquids with the cup on a level surface. When using a glass cup, measurements can be made accurately at eye level. Stoop down to do this -- don't hold the cup up in the air. The surface of the liquid may slant and deceive you.
   f. Syrups, molasses, honey or other thick, sticky liquids should be poured into a measuring cup or spoon for accuracy. An extra amount of liquid may cling to the bottom of the spoon if it is dipped into the container. The liquid will pour more easily from the measuring cup or spoon if they are greased.
TABLE OF MEASURES

| 3 teaspoons | 1 tablespoon |
| 4 tablespoons | 1/4 cup |
| 5-1/3 tablespoons | 1/3 cup |
| 8 tablespoons | 1/2 cup |
| 16 tablespoons | 1 cup |
| 2 cups | 1 pint |
| 2 pints | 1 quart |
| 4 quarts | 1 gallon |

DIRECTIONS FOR CAKE MAKING

CONVENTIONAL METHOD

1. Cream the fat (shortening or butter) until light and fluffy. Start with fat that is at room temperature. Add sugar gradually beating until light and fluffy.

2. If well-beaten eggs are called for, beat the eggs until light and lemon-colored before adding to the sugar and shortening. Then beat vigorously again to give cake a fine texture.

3. Add the flour mixture and milk alternately. Begin and end with flour mixture. Add 1/3 of the flour at a time and 1/2 of the milk at a time. Blend thoroughly, but be careful not to mix too much. Over-beating after the flour and milk have been added, causes a cake to have larger holes and an uneven texture.

4. If beaten egg whites are added to mixture; have eggs at room temperature before beating. Egg whites should be beaten just before they are to be used and only until they stand in stiff peaks. They should be smooth and glossy -- never curdled or dry.

5. Bright, shiny metal pans are best to use for baking cakes. These heat quickly and reflect the heat so the cakes brown delicately. Each recipe specifies whether pans should be greased and floured, lined and greased, or ungreased.

   For greasing, dip a pastry brush or a little crumpled paper in oil or shortening. Rub over inside of pan to cover bottom and corners well with a thin film of fat. Butter may be preferred for flavor. It is not necessary to grease sides of cake pans.

   To flour the pan, sprinkle a little flour into greased pan, then shake pan to coat it evenly with flour. Empty out any excess flour.

   To line pans for large cakes, cut a piece of heavy waxed paper to fit the bottom of the pan. Fit this into the pan, then grease the paper well. This gives protection against sticking on the bottom.

   For cup cakes and small fancy cake pans, grease pans well on bottoms, little or none on sides.

   6. Spread cake batter evenly in pans. Then, drop pans lightly on table or cut through batter with spatula to break large air bubbles. Bake as directed in the recipe.

QUICK MIX METHOD

(Use only when recipe has been developed especially for this method -- recipes, page 10).

1. For best results, all ingredients should be at room temperature; shortening should be soft enough to stir with a spoon.

2. These cakes can be mixed completely in one bowl. Sift dry ingredients into this bowl and add the shortening. Be sure to use the type of shortening designed for quick-mix cakes. Hydrogenated shortening or lard-type shortenings are most suitable.

3. Add the liquid and eggs according to the directions in the recipe. (The kind of cake determines the order of adding the liquid and eggs.)

4. Beat ingredients by hand, or with an electric mixer for the specified time -- usually about 4 minutes. (Continue directions with step 5.)
DIRECTIONS FOR MAKING COOKIES

1. Cookies contain approximately the same ingredients and are mixed much like cakes. Recipe directions for mixing should be followed carefully.

2. Mix lightly; overworking or too much handling of dough causes toughness.

3. Here are some suggestions for shaping:
   - DROP COOKIES—For each cookie, put specified amount of dough on cookie sheet, leaving about 2 inches between cookies.
   - REFRIGERATOR COOKIES—Be sure to have rolls of dough thoroughly chilled before cutting them into thin slices with a sharp knife (thin blade).
   - ROLLED COOKIES—Flour board and rolling pin slightly. Too much flour makes cookies tough. Flour cookie cutter to keep dough from sticking. Cut cookies close together in order to get as many as possible from the first rolling. Cookies become tough when dough is rolled over and over.
   - PRESSSED AND MOLDED COOKIES are easier to handle if the dough is thoroughly chilled.

GUIDES TO GOOD BAKING

1. Be sure oven has reached the desired temperature before putting cakes and cookies in to bake. Avoid opening door during the first half of the baking time, because this causes temperature to change and may make the product unsatisfactory. For best results, the oven should remain at the specified temperature throughout the baking period, unless the recipe suggests otherwise.

2. Cakes should be baked as near the center of the oven as possible -- cookies slightly above center. Do not place one pan directly over another pan. This will hinder the free circulation of heat between and around pans. Do not crowd oven. Baking pans must not touch the sides of the oven.

3. When cake shrinks slightly from sides of pan, it is done. Another method of testing is to touch surface of cake lightly with finger tip. If cake is done, the surface will spring back into place. Or, insert a wooden pick or metal cake tester into center of cake. If it comes out clean, the cake can be removed from the oven.

4. Remove cake or cookies from oven as soon as they are done.

TEMPERATURE GUIDE FOR BAKING

Very slow ............... 250-275°F.
Slow ................... 300-325°F.
Moderate .............. 350°F.
Moderately hot ............ 375°F.
Hot .................. 400-425°F.
Very hot ................ 450-475°F.
Extremely hot (Broil) ....... 500-525°F.

COOLING AND FROSTING

COOLING

1. Place cake pan on a wire cake rack and let cool about 5 minutes. Run a spatula around sides of pan to loosen cake. Turn cake out; place right side up on a wire rack to finish cooling. This prevents a soggy crust by allowing air to circulate around the cake.

2. Cookies, also, should cool on a wire rack.

3. A true sponge cake should be inverted in the pan until it is thoroughly cool, then removed from pan.

FROSTING

1. After the cake is thoroughly cool, brush it free of all crumbs.

2. Frost sides of cake first. Then heap the frosting on center of top and work it out toward the edges.

3. Cup cakes may be frosted on top or they may be inverted and frosted on bottom and sides.

4. Powdered sugar or jelly may take the place of frosting on the top of a cake.
For perfect cakes and cookies every time, start with a recipe from a reliable source. Then, carefully follow the essential baking steps -- planning, measuring, mixing, baking and cooling. After baking the cake or cookie, judge it to see if it is perfect by using the table below STANDARDS OF QUALITY FOR CAKES AND COOKIES. This table lists standards for a perfect product. And these standards should be the basis for deciding if a cake or cookie is top-quality.

The SAMPLE SCORE CARD (page 7) sets the pattern to follow in judging a cake. When scoring a cake, look at the outside and write down whether the shape, size, crust and color are standard. Then, cut a slice to see if the color, texture and lightness of the cut-surface are up to par. After examining it inside and out, break a piece in two and decide if the crust and crumb are tender, and the cake feels moist. Next, smell the cake to see if it has a pleasing aroma, and finally -- "the proof of the pudding is in the eating" -- taste it!

Now that the cake is judged, look over the score card and determine if the cake meets the requirements of a good product. If it falls short of standard in any of these qualities, consult the table, CAUSES OF COMMON DEFECTS IN CAKES (page 8), to find out the cause. Using this table, check the recipe and retrace the steps in baking to discover why the cake was below standard. With these facts firmly in mind, the next cake will most certainly rate perfect!

### STANDARD OF QUALITY FOR CAKES AND COOKIES

<table>
<thead>
<tr>
<th>QUALITY</th>
<th>COOKIES</th>
<th>CAKES WITH FAT</th>
<th>CAKES WITHOUT FAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE (outside)</td>
<td>Uniform size, shape and thickness; fairly smooth surface; no visible flour; even delicate brown, slightly darker around edges*.</td>
<td>Symmetrical in shape; flat or slightly rounded top; good volume--fills baking pan; dull, fairly smooth surface; uniform golden brown*.</td>
<td>Symmetrical in shape; flat or slightly rounded top; fills baking pan; soft, slightly rough surface; uniform golden brown*.</td>
</tr>
<tr>
<td>Shape</td>
<td></td>
<td>Even color throughout cut-surface; fine even grain free from tunnels (many small uniform air cells, evenly distributed); velvety feel to tongue and fingers; holds shape when cut**; light in weight in proportion to size.</td>
<td>Even color throughout cut-surface; uniform cut-surface; medium to small in size; light in weight in proportion to size.</td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td>Tender crust; very tender crumb; slightly moist.</td>
<td>Very tender crust; very tender crumb; slightly moist.</td>
</tr>
<tr>
<td>Crust</td>
<td></td>
<td>Pleasant, appealing aroma; delicate; sweet, well-blended flavor.</td>
<td>Pleasant, appealing aroma; delicate flavor.</td>
</tr>
<tr>
<td>Crumb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moisture Content</td>
<td>Tender and crisp throughout (refrigerator); or crisp crust, cake-like crumb (soft cookies).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLAVOR</td>
<td>Pleasant, appealing aroma; mild, pleasing flavor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taste</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Except chocolate or others that have a color characteristic of the ingredients they contain.

** Quick method cakes differ from those prepared by the conventional method in that they have a much finer, even grain, and a softer feel to the tongue and fingers.
SAMPLE SCORE SHEET FOR CAKES CONTAINING FAT*

<table>
<thead>
<tr>
<th>Full Score</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Product</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External characteristics</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shape--symmetrical, slightly rounded top, free from cracks or peaks</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfrosted: Smooth, uniform light brown except where ingredients darken the color</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume--light in weight in proportion to size</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal characteristics</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texture--tender, moist crumb, velvety feel to the tongue</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain--fine, round, evenly distributed cells with thin cell walls; free from tunnels</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color--uniform, characteristic of kind of cake</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flavor</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blended flavor of ingredients, free from undesirable flavor from fat, leavening, flavoring, or other ingredients</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAILURES IN CAKES</th>
<th>BUTTER CAKES</th>
<th>SPONGE CAKES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humps or cracks on top</td>
<td>too much flour</td>
<td>too much sugar or flour</td>
</tr>
<tr>
<td></td>
<td>too little liquid</td>
<td>temperature too high</td>
</tr>
<tr>
<td>Hard, dry crust</td>
<td>too much flour</td>
<td>baked too long</td>
</tr>
<tr>
<td></td>
<td>temperature too high</td>
<td>too much sugar</td>
</tr>
<tr>
<td></td>
<td>too little sugar</td>
<td>overmixing</td>
</tr>
<tr>
<td>Sticky crust</td>
<td>too much sugar</td>
<td>temperature too high</td>
</tr>
<tr>
<td></td>
<td>underbaked</td>
<td>too much sugar</td>
</tr>
<tr>
<td>Too pale a crust</td>
<td>too little shortening or sugar</td>
<td>too little sugar</td>
</tr>
<tr>
<td></td>
<td>too much leavening</td>
<td>too much flour</td>
</tr>
<tr>
<td></td>
<td>temperature too low</td>
<td>temperature too low</td>
</tr>
<tr>
<td></td>
<td>overmixing</td>
<td></td>
</tr>
<tr>
<td>Fallen</td>
<td>too much shortening or sugar</td>
<td>too much sugar</td>
</tr>
<tr>
<td></td>
<td>too much leavening</td>
<td>overmixing</td>
</tr>
<tr>
<td></td>
<td>underbaked</td>
<td>not baked long enough</td>
</tr>
<tr>
<td></td>
<td>undermixing</td>
<td></td>
</tr>
<tr>
<td>Heavy and compact</td>
<td>too much shortening or sugar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>too many eggs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>overmixing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature too high</td>
<td></td>
</tr>
<tr>
<td></td>
<td>underbaked</td>
<td></td>
</tr>
<tr>
<td>Crumbly</td>
<td>too much shortening or sugar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>too much leavening</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature too low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>undermixing</td>
<td></td>
</tr>
<tr>
<td>Soggy layer at bottom</td>
<td>egg yolks underbeaten</td>
<td>egg yolks underbeaten</td>
</tr>
<tr>
<td></td>
<td>too much liquid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>undermixing</td>
<td></td>
</tr>
<tr>
<td>Coarse grain</td>
<td>undermixing</td>
<td>temperature too low</td>
</tr>
<tr>
<td></td>
<td>too much leavening or liquid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature too low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>too little sugar</td>
<td></td>
</tr>
<tr>
<td>Dry crumb</td>
<td>too little shortening or liquid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>too much leavening</td>
<td></td>
</tr>
<tr>
<td></td>
<td>too much flour</td>
<td></td>
</tr>
<tr>
<td></td>
<td>baked too long</td>
<td></td>
</tr>
<tr>
<td>Tough crumb</td>
<td>too little shortening or sugar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>overmixing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature too high</td>
<td></td>
</tr>
<tr>
<td></td>
<td>too many eggs</td>
<td></td>
</tr>
<tr>
<td>Tunnels</td>
<td>too much flour</td>
<td></td>
</tr>
<tr>
<td></td>
<td>overmixing</td>
<td></td>
</tr>
<tr>
<td>Uneven layer</td>
<td>uneven oven heat</td>
<td>uneven oven heat</td>
</tr>
<tr>
<td></td>
<td>pans too near sides of oven</td>
<td></td>
</tr>
<tr>
<td></td>
<td>one pan directly over another</td>
<td></td>
</tr>
<tr>
<td></td>
<td>stiff batter not spread evenly</td>
<td></td>
</tr>
<tr>
<td></td>
<td>uneven shelves</td>
<td></td>
</tr>
<tr>
<td>Undersized</td>
<td>egg whites overbeaten or underbeaten</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cake pans too large</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature too high</td>
<td></td>
</tr>
<tr>
<td></td>
<td>undermixing</td>
<td></td>
</tr>
</tbody>
</table>
### PRINCIPAL OPERATIONS IN THE PROCESSING OF EVAPORATED MILK

<table>
<thead>
<tr>
<th>EVAPORATION</th>
<th>HOMOGENIZATION</th>
<th>VITAMIN D FORTIFICATION</th>
<th>STERILIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The removal of about 60% of the water which all cows' milk naturally contains.</td>
<td>The process that breaks up the butterfat globules of milk into very small particles. These smaller fat particles are evenly distributed and do not rise to the top to form cream.</td>
<td>The addition of vitamin D to the extent of 400 U.S.P. units per reconstituted quart, the level recommended by the Council on Foods and Nutrition of the American Medical Association. (The type of vitamin D used to fortify Pet Milk is pure crystalline Vitamin D&lt;sub&gt;3&lt;/sub&gt;)</td>
<td>The process of heating (autoclaving) the milk at 240° F. for 15 minutes after it has been hermetically sealed in the cans.</td>
</tr>
</tbody>
</table>

**PROCESSING GIVES EVAPORATED MILK THESE ADVANTAGES:**

#### EVAPORATION
1. The food value is doubled. Evaporated milk contains twice the protective food substances of whole milk.
2. Evaporated milk whips.
3. Economy -- the smaller volume reduces the cost of transportation and storage thus lowering cost to the consumer.

#### HOMOGENIZATION
1. Uniform butterfat content.
2. A smooth consistency.

#### FORTIFICATION WITH VITAMIN D
1. A dependable source of vitamin D is supplied at no extra cost to the consumer. Babies and growing children must have milk to supply calcium and phosphorus to build strong bones and sound teeth. Vitamin D is necessary for utilization of these minerals. Medical authorities* have determined that a daily quota of milk fortified to a potency of 400 units of vitamin D<sub>3</sub> per quart will provide the vitamin D needed by normal infants for good bone and tooth development, and for best over-all growth.


#### STERILIZATION
1. Absolute safety -- evaporated milk is sterile.
2. Long-time keeping qualities -- evaporated milk will keep indefinitely in the sealed can.
3. Ready digestibility -- the heat of sterilization changes the nature of the protein so that softer, smaller curds are formed in the stomach.

### COMPARISON WITH BOTTLED MILK, CREAM AND WHIPPING CREAM

<table>
<thead>
<tr>
<th></th>
<th>Bottled Milk*</th>
<th>Pet Milk</th>
<th>Cream*</th>
<th>Whipping Cream*</th>
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<tbody>
<tr>
<td>Fat</td>
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<td>7.9%</td>
<td>20.0%</td>
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<td>4.9%</td>
<td>9.5%</td>
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<tr>
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<td>7.0%</td>
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<td>.6%</td>
<td>.5%</td>
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<tr>
<td>Total Solids</td>
<td>13.0%</td>
<td>25.9%</td>
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TESTED RECIPES

Here are recipes that demonstrate basic principles of baking cakes and cookies with easy-to-follow, step-by-step directions.

These recipes show how to use evaporated milk in making sponge-type cake, butter cakes and the different kinds of cookies. Recipes for making butter-type cakes by both quick-mix and conventional methods are included.

All of these recipes have been tested and perfected by home economists in the Pet Milk Experimental Kitchens. By following directions given, you are assured of baking success.

High Altitude Recipes

You'll have perfect success with any of these recipes in any altitude up to 3,000 feet. These recipes adjusted for higher altitudes may be had on request. State altitude at which you live when writing for high altitude recipes.

Write to:

HOME ECONOMICS DEPARTMENT
PET MILK COMPANY
1471 Arcade Building,
St. Louis 1, Missouri

ORANGE CRUNCHIES

Set oven at moderate (350°F.).

Sift together (1 cup sifted, all-purpose flour)
onto piece of waxed paper (1-1/2 teaspoons baking powder)
(1/2 teaspoon salt)

Put into bowl (2/3 cup soft shortening)

Add gradually, mixing until light and fluffy (2/3 cup sugar)

Add and beat hard (1 egg)

Stir in about half of flour mixture.

Stir in (1/4 cup Pet Evaporated Milk)

Add remaining flour mixture and mix well.

Fold in (3 cups corn flakes)
(1/2 cup coarsely broken nuts)
(1 teaspoon grated orange rind)

Drop from teaspoon on greased baking sheet about 2 inches apart.

Bake on oven rack slightly above center 15 minutes or until light brown. Remove from baking sheet at once.

Makes about 4 dozen cookies.

CHERRY COCONUT COOKIES

Set oven at moderately hot (375°F.).

Sift together (2-1/2 cups sifted, all-purpose flour)
on to piece of waxed paper (1 teaspoon baking powder)
(1/2 teaspoon salt)

Mix in a bowl (3/4 cup soft shortening)
(1 cup sugar)

Add and beat hard (1 egg)

Stir in (1/4 cup Pet Evaporated Milk)
(1 teaspoon vanilla)

Add flour mixture and mix well.

Stir in (1/2 cup finely cut maraschino cherries)

Shape dough into balls using about a tablespoon of dough for each ball.

Roll balls in (2 cups chopped, shredded coconut)

Place on greased baking sheet about 2 inches apart.

Bake on oven rack slightly below center 12 minutes or until light brown. Remove from baking sheet at once.

Makes about 4 dozen cookies.
FUDGE BROWNIES

Set oven at moderate (350°F.).
Grease well an 8-inch square pan.
Sift together onto 1 cup sifted, all-piece of waxed paper. 1/2 teaspoon baking powder. 1/4 teaspoon salt. 1/3 cup cocoa
Put into a bowl, 1/3 cup soft shortening. Add gradually, mixing until light and fluffy. 1 cup sugar. Add and beat hard. 1 egg
Stir in about 1/2 of flour mixture.
Then stir in 1/4 cup Pet Evaporated Milk.
Add remaining flour mixture and mix well.
Fold in 1/2 cup broken nuts.
Spread batter evenly in greased pan. Bake on center rack of oven 30 minutes, or until cake pulls from sides of pan. Cut into 2-inch squares while still warm. Cool in pan. Makes 16 squares.

CHOCOLATE OATMEAL COOKIES

Set oven at moderately hot (375°F.).
Sift together onto 1 cup sifted, all-piece of waxed paper. 1/2 teaspoon baking powder. 1/2 teaspoon salt
Put into a bowl, 1/2 cup soft shortening.
Add gradually, 1/2 cup brown sugar. mixing until lightly packed light and fluffy. 1/4 cup white sugar
Add and beat hard. 1 egg
Stir in flour mixture.
Then stir in 2 tablespoons Pet Evaporated Milk 1 teaspoon vanilla.
Add and mix well 2 cups uncooked rolled oats 1 cup semi-sweet chocolate pieces (1-6 ounce package)
Drop from a teaspoon on greased baking sheet about 2 inches apart. Bake on oven rack slightly above center 8 minutes or until brown. Remove from baking sheet at once. Makes about 3-1/2 dozen cookies.

SPRITZ COOKIES

Set oven at hot (400°F.).
Put into 2 or 3-quart bowl 1 cup soft butter.
Add gradually, mixing until light and fluffy. 2/3 cup sugar
Add and mix 1 unbeaten egg thoroughly. 2 teaspoons vanilla 1/4 cup Pet Evaporated Milk
Mix in 3 cups sifted, all-purpose flour
Fill cookie press with dough. Force the dough through a cookie press onto a cold, ungreased baking sheet. Hold the press upright, and force out the dough until it appears at the edge of the mold - then lift the press away. (letter S's, rosettes, fluted bars or other desired shapes may be made).
Bake on oven rack slightly above center for 12 minutes or until lightly browned.
Remove from baking sheet at once. Makes 5 dozen.

PEANUT BUTTER COOKIES

Set oven at moderately hot (375°F.).
Sift together onto 1-1/4 cups sifted, all-piece of waxed paper. 1/2 teaspoon baking powder. 3/4 teaspoon baking soda
Put into bowl. 1/2 cup shortening 1/2 cup peanut butter
Mix in gradually. 1/2 cup sugar
Add and beat hard. 1 egg
Stir in 2 tablespoons Pet Evaporated Milk
Then stir in flour mixture and mix well.
Roll in 1-inch balls, place on greased baking sheet about 2 inches apart. Flatten with a fork dipped in flour.
Bake on oven rack slightly above center 10 minutes or until light brown.
Remove from baking sheet at once. Makes about 4 dozen cookies.
CRISP SUGAR COOKIES

Set oven at moderately hot (375°F.).

Sift together onto piece of waxed paper:

- 1 1/4 cups sifted, all-purpose flour
- 1 teaspoon baking powder
- 1/2 teaspoon salt

Put into a 2-quart bowl:

- 1/2 cup soft shortening
- 1 teaspoon lemon extract*

Add gradually, mixing until light and fluffy:

- 3/4 cup sugar

Add and beat hard:

- 1 egg

Stir in about 1/2 of flour mixture.

Then stir in:

- 2 tablespoons Pet Evaporated Milk

Add remaining flour mixture and mix well.

Roll 1/8-inch thick on floured board. Cut into rounds with floured 2-inch cookie cutter. Put on greased baking sheet about an inch apart.

Sprinkle tops with:

- 1 tablespoon sugar

Bake on oven rack slightly above center 8 minutes or until light brown. Remove from baking sheet at once. Makes about 5-1/2 dozen cookies.

Note: For Old-Fashioned Sugar Cookies, roll dough 1/4 inch thick and cut with 3-inch cookie cutter.

* Vanilla may be used in place of lemon extract.

RASIN FILLED BARS

Set oven at hot (400°F.).

Grease well an 8-inch square pan.

Mix in saucepan:

- 1 cup seedless raisins, ground fine
- 1/2 cup sugar
- 2 tablespoons orange juice
- 1/8 teaspoon salt

Cook and stir over low heat until mixture is very thick. Cool.

Sift onto piece of waxed paper:

- 1-1/2 cups sifted, all-purpose flour
- 1 teaspoon baking powder
- 1/2 teaspoon cinnamon
- 1/4 teaspoon ground cloves
- 1/4 teaspoon salt
- 1/2 cup soft shortening
- 2 tablespoons Pet Evaporated Milk

Divide dough in half. Roll each half between 2 pieces of waxed paper into an 8-inch square.

Put one square in the bottom of prepared pan, then spread with raisin mixture. Cover with other square of dough.

Bake on oven rack slightly below center for 25 minutes. Remove from oven and turn out on cake rack immediately. Cool, then cut into bars. Makes 2 dozen.
**DATE SWIRL COOKIES**

Set oven at moderately hot (375°F.).

Mix in saucepan . . . . ( 1 cup finely-cut, pitted dates
(1/2 cup brown sugar
(1/3 cup Evaporated Milk
Cook over medium heat until mixture is thick, stirring all the time.

Remove from heat (1/4 cup chopped nuts and stir in . . (1 tablespoon lemon juice

Cool.

Sift onto piece of (1-3/4 cups sifted, all-waxed paper . . . . (3/4 teaspoon baking soda
Mix in bowl . . . . . . (1/2 cup shortening
(1/4 teaspoon grated lemon rind
(3/4 teaspoon salt
(1 cup brown sugar
Stir in about 1/3 of flour mixture.

Then stir in about (1/4 cup Pet Evaporated Milk

Stir in 1/2 of rest of flour mixture. Then stir in rest of milk. Add remaining flour mixture and mix well.

Roll dough between 2 pieces of waxed paper into a 12-inch square.

Remove top piece of paper and spread with date mixture. Roll up like jelly roll using bottom piece of paper to lift and roll dough. Wrap in waxed paper and put into refrigerator overnight or until firm enough to slice.

When cookies are firm, cut in 1/4-inch slices. Bake on ungreased baking sheet on oven rack slightly above center for 10 minutes.

Remove from baking sheet at once. Makes 4 dozen cookies about 2-1/2 inches in diameter.

**THREE-WAY COOKIES**

Set oven at moderately hot (375°F.).

Sift together onto piece of waxed paper . . . . . . . (2 cups sifted, all-purpose flour
(1 tablespoon baking powder
(1/2 teaspoon salt

Put into a bowl . . . . . (6 tablespoons soft shortening
(1 teaspoon vanilla
Mix in gradually . . . . (1 cup sugar
Add and beat hard . . . . (2 eggs
Stir in about 1/2 of flour mixture.

Then stir in . . . . . . (3 tablespoons Pet Evaporated Milk
Add remaining flour mixture and mix well. Divide into 3 portions. Drop 1 portion by teaspoons on greased baking sheet. Bake on oven rack slightly above center 12 minutes or until brown. Remove from baking sheet at once.

Mix into second portion of batter; bake as directed above . . . . . . (1 teaspoon cinnamon
Mix into remaining (3 tablespoons cocoa batter; bake as directed above . . . . . (1 tablespoon Pet Evaporated Milk

Makes about 4 dozen cookies.

**JELLY ROLL**

Set oven at moderately hot (375°F.).

Grease, then dust with flour a shallow pan measuring 10-1/2 x 15-1/2 inches.

Beat until thick and lemon colored . . . (3 eggs

Add gradually, while continuing to beat . . . (1 cup sugar
Beat in all at once . . . . . (3 tablespoons Pet Evaporated Milk
A mixture of . . . . . . (2 tablespoons water
(1 teaspoon vanilla

Sift together and beat in all at once . . . . . (1 cup sifted, all-purpose flour
(1 teaspoon baking powder
(1/4 teaspoon salt

Put into prepared pan. Bake on oven shelf slightly above center 12-15 minutes, or until cake pulls from sides of pan.

Turn cake upside down on cloth . . . . . . (3 tablespoons powdered sugar sprinkled with . . . . . (3 tablespoons cocoa

Roll cake in towel and let stand 3 minutes. Unroll, spread with soft jelly. Roll up. Wrap in towel until cool.

**Three-Way Cookies (cont.)**

Put into a bowl . . . . . (6 tablespoons soft shortening
(1 teaspoon vanilla
Mix in gradually . . . . (1 cup sugar
Add and beat hard . . . . (2 eggs
Stir in about 1/2 of flour mixture.

Then stir in . . . . . . (3 tablespoons Pet Evaporated Milk
Add remaining flour mixture and mix well. Divide into 3 portions. Drop 1 portion by teaspoons on greased baking sheet. Bake on oven rack slightly above center 12 minutes or until brown. Remove from baking sheet at once.

Mix into second portion of batter; bake as directed above . . . . . . (1 teaspoon cinnamon
Mix into remaining (3 tablespoons cocoa batter; bake as directed above . . . . . (1 tablespoon Pet Evaporated Milk

Makes about 4 dozen cookies.
**BUTTER CAKE**

Set oven at moderate (350°F).

Grease, then dust with flour one 9-inch square pan or two 8-inch round cake pans.

Sift together onto:
- 2 cups sifted, cake flour
- 2 teaspoons baking powder
- 1/8 teaspoon salt

Put into:
- 1/2 cup soft butter
- 3-quart bowl

Add gradually, mixing until light and fluffy:
- 1 cup sugar

Beat in hard, one at a time:
- 2 unbeaten eggs

Stir in about 1/3 of the flour mixture.

Then stir in:
- 1/3 cup Pet Evaporated Milk
- a mixture of:

Stir in about 1/2 of rest of flour mixture. Then stir in rest of milk mixture. Add remaining flour mixture and mix well.

Pour batter into prepared pans and bake on oven rack slightly above center about 35 minutes for 9-inch square pan, 30 minutes for 8-inch round pans, or until cake pulls from sides of pan. Remove from oven and let stand 10 minutes before turning out on wire rack to cool.

**PETITS FOURS FROSTING**

Mix in a 1 or 2-quart bowl:
- 3/4 cup Pet Evaporated Milk
- 2 tablespoons vanilla

Stir in about:
- 7 cups sifted, 1 cup at a time

Beat until smooth.

**PETITS FOURS**

Put Butter Cake batter into a greased and floured shallow pan measuring about 10 x 14.

Bake on oven rack slightly above center for 25 minutes, or until cakes shrink from sides of pan. Let stand in pan about 10 minutes before turning out on wire rack to cool. When cool, cut into pieces about 1-1/2 x 2 inches. Remove any loose crumbs. Place on cake rack with waxed paper under rack. Frost with Petits Fours Frosting using table knife. Let extra frosting drip to paper underneath. Scrape frosting from paper, add a few drops of evaporated milk if necessary and use to frost other cakes.

Makes 32 Petits Fours.

**YELLOW CAKE**

Set oven at moderate (350°F).

Grease, then dust with flour one 9-inch square pan or two 8-inch round cake pans.

Sift into a 2-quart bowl:
- 1-2/3 cups sifted, 1/2 cup sugar
- 2 teaspoons baking powder
- 1/2 teaspoon salt
- 1/3 cup Pet Evaporated Milk
- 1 teaspoon vanilla

Beat hard 2 minutes with mixing spoon, or electric beater at medium speed.

Add, then beat:
- 2 minutes longer
- 2 unbeaten eggs

Put into prepared pans. Bake on center rack of oven about 40 minutes for 9-inch square pan, 30 minutes for 8-inch round pans, or until cake pulls from sides of pan. Remove from oven. Let stand in pan 10 minutes before turning out to cool.

**CUP CAKES**

Put Butter Cake batter into 18 greased 2-1/2 inch muffin cups, filling about 2/3 full. Bake on oven rack slightly above center about 20 minutes or until cake pulls from sides of cups. Let stand 10 minutes before removing from pan.

**MARBLE CAKE**

Prepare batter as for Yellow Cake. To 1/3 of batter, stir in a mixture of 1 square bitter chocolate, melted and 2 tablespoons water. Spoon alternately into prepared pans the plain batter and chocolate batter. Cut through several times with knife to get a rippled effect. Bake as for Yellow Cake.
**SPICE CAKE**

Set oven at moderate (350°F.).

Grease, then dust with flour one 9-inch square pan or two 8-inch round cake pans.

Sift into a 2-quart bowl . . . .
- 1-2/3 cups sifted, cake flour
- 1 cup sugar
- 1/2 teaspoon baking powder
- 1/2 teaspoon salt
- 1/2 teaspoon baking soda
- 1 teaspoon cinnamon
- 1/2 teaspoon nutmeg
- 1/2 teaspoon cloves
- 1/3 cup Pet Evaporated Milk
- 2 teaspoons vinegar
- 1/2 cup soft shortening
- 1/3 cup water

Sour . . . . . . . . .
- 1/3 cup Pet Evaporated Milk with 2 teaspoons vinegar

Add to flour mixture the . . . .
- 1/3 cup Pet Evaporated Milk
- 1/2 cup water
- 1 teaspoon vanilla

Beat hard 2 minutes with mixing spoon, or electric beater at medium speed.

Add, then beat 2 minutes longer . . . (2 unbeaten eggs)

Put into prepared pans. Bake on center rack of oven about 40 minutes for 9-inch square pan, 30 minutes for 8-inch round pans, or until cakes pull from sides of pans. Remove from oven. Let stand in pan 10 minutes before turning out to cool.

**CHOCOLATE FUDGE FROSTING**

Heat slowly in a 2-quart saucepan . . .
- 6 tablespoons Pet Evaporated Milk
- until butter melts . . . (1 tablespoon butter)

Remove from heat, stir in about 1/4 cup powdered sugar at a time, a mixture of . . . . . .
- 2-1/2 cups sifted, powdered sugar
- 1/2 cup cocoa
- few grains salt

Add . . . . . . . . .
- 3/4 teaspoon vanilla

Beat until smooth and creamy.

Makes enough frosting to spread on top and sides of a 9-inch square cake, or two 8-inch round layers, or eighteen 2-1/2 inch cup cakes.

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**BURNT SUGAR FROSTING**

Put into a skillet . . . . (2/3 cup sugar)

Heat slowly stirring all the time until sugar melts and becomes almost black.

Stir in gradually . . . (1/2 cup boiling water)

Stir until sugar is dissolved. Remove from heat and cool.

Heat slowly in a 2-quart saucepan . . .
- 6 tablespoons butter
- 1/4 cup burnt sugar
- until butter melts . . . (1/4 cup Pet Evaporated Milk)

Remove from heat and gradually beat in 1/2 cup at a time . . . .
- 3-1/2 cups sifted, powdered sugar
- 1 teaspoon vanilla

Makes enough frosting to spread on top and sides of a 9-inch square cake or, two round 8-inch layers, or eighteen 2-1/2 inch cup cakes.

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**POUND CAKE**

Set oven at slow (300°F.).

Grease, then dust with flour the bottoms of two loaf pans measuring about 8 x 5 x 2-1/2 inches.

Put into a mixing bowl . . . . .
- 1 cup butter

Add gradually, mixing until light and fluffy . . . .
- 1-2/3 cups sugar

Beat in one at a time . . . . . (5 eggs)

Continue beating until mixture is light and fluffy.

Fold in about a cup at a time . . . .
- 2 cups sifted, cake flour

Put into prepared pans. Bake on oven rack slightly below center for 1-1/4 hours or until toothpick or straw inserted in center comes out clean. Remove from oven and turn out on wire rack to cool.

To keep cakes moist and fresh, store in airtight, container.
CHOCOLATE CAKE

Set oven at moderate (350°F.).

Grease, then dust with flour the bottom of a 9-inch square or two 8-inch round cake pans.

Sift together onto:
- 1-3/4 cups sifted, piece of waxed paper
- 3/4 teaspoon baking soda
- 3/4 teaspoon salt

Put into a bowl, . . . . (1/2 cup soft shortening
Add gradually, mixing until light and fluffy . . . . . (1-1/4 cups sugar
Stir in . . . . . . . . . . . . (2 squares melted chocolate (see Note)
Add and beat hard. . . . . (2 unbeaten eggs

Put into bowl and let stand until needed. . . . .
Stir in . . . . . . . . . . . . (1/2 cup Pet Evaporated Milk
Stir in rest of rest of flour mixture. Then stir in rest of milk mixture. Add remaining flour and mix well.

Pour into prepared pans. Bake on center rack of oven about 45 minutes for 9-inch square pans, 35 minutes for 8-inch round pans, or until cake pulls from sides of pan.

Note: To substitute cocoa for chocolate; omit chocolate, sift 6 tablespoons cocoa with flour mixture, and add 2 tablespoons more shortening to the amount above. Proceed as directed.

UNCOOKED FROSTING

Put into 2-quart bowl . . . . . . (1/3 cup white cream cheese (one 3-oz. package)
Stir in gradually and mix until smooth . . . . . . . . . . . . (1/4 cup Pet Evaporated Milk
Add gradually, mixing until smooth and creamy . . . . . . . . . . . . (3-1/2 cups sifted powdered sugar

Makes enough frosting to spread on top and sides of a 9-inch square cake, or two 8-inch layers, or eighteen 2-1/2 inch cup cakes.

FESTIVE, UNBAKED FRUIT CAKE

Line with waxed paper bottom and sides of one 8-cup loaf pan.

Put into bowl and let stand until needed. . . . .
Mix in large bowl . . . . . . (3-1/2 cups very fine graham cracker crumbs
Add marshmallow mixture. Mix with spoon, then use hands to mix thoroughly.

Press firmly into prepared pan. Cover tightly with waxed paper and chill at least 2 days before using. Keep in refrigerator. Makes 2-1/2 pounds fruit cake.

* Any kind of nuts may be used.
** Other kinds of candied fruit may be used in place of those given.

Home Economics teachers and students, teaching dietitians and student nurses, community nutritionists and home economists, dietitians in charge of food service and lunchroom managers can obtain publications designed especially for their use by writing to:

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