All About Cakes

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BAKING INGREDIENTS—FUNCTIONS

Shortening

Fats used for baking are called shortening. They give to baked goods a short, tender, rich quality that makes them so good to eat. There are several different types—high-grade hydrogenated vegetable shortenings, butter, margarine and lard.

Your choice of shortening is important because your baking results will be no better than the shortening you use. Choose a creamy, smooth shortening that will blend easily with other ingredients. Use odorless, flavorless shortening so that it does not mask the natural food flavor. Select a shortening that does not have to be stored in the refrigerator. The ideal shortening is one of uniformly high quality that can be used for all baking—for cakes, pies and biscuits.

Flour

Flour forms the structure of a cake. Wheat flour is made from either hard or soft wheat or a combination of these. All-purpose flours milled from hard winter wheat are most economical to use for pies, cookies and breads. Cake flours are milled from soft wheat and are refined to give special baking advantages for cakes. All-purpose flour should not be substituted for cake flour. Use the kind of flour recommended in the tested recipe. There are many brands of cake and all-purpose flours. Select the one that is available and economical for your use.

Sweetening

Richness of baked foods comes from the shortening and the sugar. Cane and beet sugars can be used with equal satisfaction. A variety of sweetenings are used in recipes—granulated, powdered or confectioners, brown or white sugar, molasses, honey, syrups made from cane, corn or maple sugars. Usually brown and white sugars may be used interchangeably in a recipe. This is not true of confectioners sugar and syrups; use these as recommended in tested recipes from reputable sources.

Liquid

Milk, water and fruit juices are used as baking liquids. Fresh liquid milk, evaporated milk or powdered milk can be used. Dilute evaporated milk with equal parts of water before using. Reconstitute powdered milk as directed on the package before using in home-style recipes. Condensed milk is sweetened and condensed and cannot be used in place of regular milk.

Leavening

Leavenings are used in batters and dough to aerate them and to make them rise. Baking powder, yeast, cream of tartar and sour milk with baking soda are the commonly used leavenings.

Baking powder is a commercially prepared complete leavening. It may be of the double-acting or combination type which has two acid ingredients—one of which acts immediately when combined with liquid and another of which has a delayed or second action in the oven. Single-acting baking powders have one acid ingredient, either phosphate or tartrate, which acts as soon as it is combined with liquid. The type is usually indicated on the label. Usually less of the double-acting than single-acting baking powder is required in recipes. For that reason, use baking powders as recommended by their manufacturer or as indicated in tested recipes. Double-acting baking powder is more suitable for Hawaii's climate.

BAKING EQUIPMENT

One good baking rule is good equipment. Do you know the essential and helpful pieces of baking equipment? Here are the measuring, preparation and baking utensils you should have to do a good job for cakes:

Measuring cups and spoons	Electric beater or hand beater
Flour sifter	Wooden mixing spoon
Rubber scraper and spatula	Cake pans
Mixing bowl	Cooling racks

Measuring cups of aluminum, glass or plastic, with fractions of cups clearly marked, are good for measuring ingredients. Individual measuring cups (called Mary Ann cups) are available in 1/4-, 1/3-, 1/2- and 1-cup units; one specialty company now makes a 1/8-cup measure. A glass liquid measuring cup with extra rim and pouring lip is especially helpful.

Standard metal or plastic measuring spoons in sets of 1/4, 1/2, and 1 teaspoon and 1 tablespoon are essential.

Flour sifters for household use are standard 1-cup, 2-cup and 1-quart sifters. An ordinary fine strainer or sieve can be used.

Cake pans of heavy tin, aluminum or baking glass come in various sizes and shapes. The metallic pans may have a teflon finish. Most recipes are designated for 8- by 1-1/2-inch or 9- by 1-1/2-inch layers or for 9- by 13-inch loaf pans. Check the pan size called for in the recipe.

Cooling racks are simple wire platforms that permit much quicker cooling of the cake. Cooling on a rack prevents moisture collection on the bottom of the cake pan.

Note: Take care of baking equipment. Don't use cake pans for broiling. Don't run cold water into a hot baking pan—sudden changes in temperature will cause the pans to warp. Wash and dry pans after use.

ABC'S OF MEASURING

- Use standard measuring cups and spoons.
- Always use level measurements.
- Sift flour before measuring.
- Sift sugar only if it is lumpy. Brown sugar should be packed into the measuring cup so that it will hold its shape when unmolded.
- Pour liquids to the brimful measure in unit cup measures. In a marked measuring cup, always read the measure at eye level.
- Shortening is measured most accurately in a unit cup measure. If a one-cup glass measure is used, the water displacement method is satisfactory for measuring amounts less than one cup.

How To Measure Shortening in Cup Units

Scoop creamy shortening from can to cup with a rubber scraper or spatula. Press it into the cup and level it off:

For 3/4 cup of shortening, use 1/2-cup and 1/4-cup measures.
For 2/3 cup of shortening, use 1/3-cup measure twice.
For less than 1/4 cup, measure by tablespoons (4 tablespoons equal 1/4 cup).

How To Measure Shortening by Water Displacement Method

Use fractions of a cup of water, then add shortening as follows:

For 3/4 cup of shortening, use 1/4 cup of water in a 1-cup measure.
For 2/3 cup of shortening, use 1/3 cup of water in a 1-cup measure.
For 1/2 cup of shortening, use 1/2 cup of water in a 1-cup measure.
For 1/3 cup of shortening, use 2/3 cup of water in a 1-cup measure.
For 1/4 cup of shortening, use 3/4 cup of water in a 1-cup measure.

OTHER HELPFUL HINTS TO BETTER BAKING

- Read the recipe carefully.
- Check all ingredients and equipment before you start.
- Use ingredients at room temperature unless otherwise indicated.
- Use squares of heavy waxed paper for keeping measured ingredients handy until ready to use.
- Preheat oven. Turn oven on and set at baking temperature required.
- Use the pan size called for in the recipe. A good general rule to follow is to measure the baking pans you plan to use. If the baking pan is too small, the cake will run over the edges of the pan as it bakes. If small pans are used, fill half full and bake the remaining batter in cup cakes. If the pan is too large, the cake will be small and flat. If pans are larger you need a larger recipe.

TESTED METHODS AND RECIPES

There are two methods accepted for making cakes—the conventional method and the quick method. For many years cake recipes have used the conventional way of mixing the ingredients—creaming shortening and sugar first, then adding other ingredients one at a time.

In a more streamlined method of making cakes, all ingredients are mixed in a single bowl and you do not cream the shortening. It saves time and motion and makes it easier to bake a better cake.

Let's compare the two methods of mixing:

Conventional Method

Cream the shortening, sugar and salt together until light and smooth.
Add eggs and blend thoroughly.
Sift flour and baking powder in a separate bowl.
Add milk and flavoring to the creamed mixture alternately with the flour. Begin and end with the flour. Beat until smooth.

Quick Method

Measure shortening, sugar, salt and flour in a single bowl. Add part of the milk and mix for 2 minutes.
Stir in the baking powder, add the eggs and remaining milk. Mix thoroughly for 2 minutes.
Ready-mix is a quick method cake.

Quality of Cakes Made by the Two Methods

Cakes made by the two methods differ in a number of respects. Although both are light, the grain and texture are not the same. Many people describe the grain of the quick-method cake as more "feathery." It is more uniform and fine because of the extra sugar added. The shortening quick-method cakes are higher, lighter, more moist than cakes made by the conventional method and have a richer eating quality which appeals to many people. Conventional cakes are usually best when eaten soon after baking.

Recipes should not be used interchangeably with the two methods. The proportions of the ingredients differ, depending on the method you use. So be sure you're using a quick-method recipe when you make a quick-method cake.

Commercial cake mixes are one version of quick-method cakes, since liquid only or liquid and eggs are added and the mixture beaten about 6 minutes.

Basic Recipes

You should know how to make conventional cakes as well as quick-method cakes if you hope to be a perfect cake artist. Try both the quick-method and the conventional method and decide for yourself which method you prefer.

CONVENTIONAL CHOCOLATE CAKE

(Makes two 8-inch layers)

1/2 cup shortening
1-1/4 cups sugar
1 teaspoon salt
2 eggs
2 squares (2 oz.) unsweetened chocolate, melted
1-3/4 cups sifted cake flour
1 teaspoon soda
1 cup buttermilk or sour milk
1 teaspoon vanilla

Hand Method: cream shortening, sugar and salt until light and fluffy; add eggs and blend thoroughly. Stir in melted chocolate. Combine flour and soda. Add dry ingredients alternately with milk and vanilla to shortening-egg mixture. Begin and end with flour. Beat until smooth. Place in two 8-inch layer pans (1-1/2 inches deep) which have been rubbed with shortening and the bottom lined with heavy waxed paper. Bake in moderate oven (350 F) about 30 minutes.

Mixer Method: if cake is made with a mixer, cream shortening, sugar, salt and eggs 3 minutes at medium speed. Stir in chocolate, then add flour and milk alternately, mixing for a total of 3 minutes at low speed. The overall mixing time is 6 minutes.

QUICK-METHOD YELLOW CAKE

The following chart includes recipes for an 8-inch, one-layer, one-egg cake; an 8-inch, two-layer, two-egg cake, and a 9-inch, two-layer, three-egg cake, which can also be baked in a loaf pan or in cup cakes.

Method	Ingredients	Deep 8" 8" x 1½" 1 layer (1 egg)	Deep 8" 8" x 1½" 2 layers* (2 eggs)	Deep 9" 9" x 1½" 2 layers** (3 eggs)
Measure into mixing bowl and mix thoroughly for 2 minutes	Sifted cake flour	1 cup	2 cups	2-1/2 cups
	Sugar	2/3 cup	1-1/3 cups	1-2/3 cups
	Shortening	1/4 cup	1/2 cup	2/3 cup
	Salt	1/2 teaspoon	1 teaspoon	1 teaspoon
	Milk	1/4 cup	2/3 cup	3/4 cup
Stir in	Baking powder	1-1/2 teaspoons	3 teaspoons	3-1/2 teaspoons
Add and mix thoroughly for 2 minutes	Milk	1/4 cup	1/3 cup	1/2 cup
	Whole eggs	1	2	3
	Flavoring	1/2 teaspoon	1 teaspoon	1 teaspoon
Baking temperature		375 F	375 F	375 F
Baking time		25-30 minutes	25-30 minutes	30-35 minutes
Yield		1 layer	2 layers	2 layers

*This will make 26 to 28 cup cakes. Use 2 to 2-1/2 tablespoons batter in each. Bake at 400 F, 15 to 20 minutes.
**This will make 1 loaf cake 9" x 13" x 2." Bake for 45 to 50 minutes.

Another quick-method cake is the following:

"CRAZY CAKE"
MIX-IN-PAN CAKE
(No beating—no egg)

1-1/2 cups flour
1 cup sugar
1 tablespoon vinegar
1/4 teaspoon red vegetable coloring
6 tablespoons salad oil
5 tablespoons cocoa
Dash salt
1 teaspoon baking soda
1 cup water
1-1/2 teaspoons vanilla

Sift flour and sugar together into greased 8-inch square pan. Make 3 nests (pukas) in flour and sugar mixture in pan. In first nest put vinegar and red coloring; in second nest put oil; in third nest put cocoa. Add soda to vinegar nest. Pour the water and the vanilla over all this mixture. STIR, do not beat, until mixture is smooth (about 5 minutes). Bake in moderate oven, 350 F, approximately 25 minutes or until cake just pulls away from the edge of the pan. When cool, split cake and frost between "layers" and top and sides with Fluffy Frosting (see p. 13.)

HOW DOES YOUR CAKE RATE?

Suppose you were called on to judge a cake contest. What would you look for among all the different kinds of cakes? What is it that makes a cake a winner?

Cakes are judged on appearance and eating quality. A perfect cake would score 100 percent on the chart which shows what judges look for in a prize-winning cake.

Appearance		Eating Quality	
Volume—baked layers should be about the same height as the pan	15%	Tender	20%
Crust—uniform color, level or very slightly rounded top	10%	Light, velvety or feathery texture	20%
Crumb—uniform, fine structure, thin cell walls	10%	Moist	5%
		Flavor, good blend of ingredients	20%
	35%		65%

CAKE PROBLEMS–CAUSES AND CORRECTIONS

Use the following chart to detect the causes of cake failures and how they can be corrected.

When This Happens	It May Be Caused by This	To Correct It, Try This
Heavy streak	1. Incomplete mixing	Beat vigorously by hand, or increase speed with mixer. Overmix rather than undermix quick-method cakes. Scrape mixing bowl frequently.
	2. Cold ingredients	Use ingredients at room temperature for easier blending. Increase mixing time if cold ingredients are used.
	3. Improper cooling	Cool cake in pan on a cake rack so that air circulates freely around it.
Cake cracks	1. Baked at too high temperature	Check oven temperature.
Cake falls or runs over edges of baking pan	1. Too much batter for the pan. Batter rises, spills over edges of pan. Cake from remaining batter falls.	Use pan size recommended for recipe. If smaller pans are used, fill them half full and bake remaining batter in cup cakes.
	2. Insufficient baking. If removed from oven before cake is completely baked, it may fall.	Cake is baked when it begins to pull away from sides of pan. It is baked if no imprint is left when top of cake is lightly touched.
	3. Too much baking powder.	Use level measurements.
Cake breaks or is difficult to remove from pan.	1. Improper cooling. Removing cake from pan too soon after baking.	Allow cake to cool in the pan on a rack 10-20 minutes. Loosen cake from sides of pan with knife. Place rack over top of cake in pan and invert rack and pan together.

When This Happens	It May Be Caused by This	To Correct It, Try This
	2. Improper pan treatment.	Brush pan with shortening or use paper liner on bottom of pan.
	3. Incomplete mixing.	Beat vigorously by hand or use a faster speed on the mixer.
Small flat cake	1. Baked in pan too large for batter.	Use size recommended. Measure size of pan used.
	2. Not enough leavening.	Test baking powder by stirring a spoonful in water. If active, it will bubble at once.

WHAT ABOUT READY-MIXES?
(A quick method cake)

On the market today are many varieties of cake mixes for your convenience and tastes. Personalize or "innovate" the ingredients to be added, as substituting fruit juices for milk or water, or crushed pineapple or apple sauce. Mix two flavors of cake mix for a marbleized effect. Very distinctive desserts can be developed in this manner.

Three factors to be considered about mixes might be cost compared with cake made from separate ingredients, time factor, product quality, promotion, advertising, packaging and distribution.

Cost—A conventional chocolate cake such as the recipe listed here usually costs less than a ready mix cake. For an angel food cake it is cheaper to use a mix than to start "from scratch" because commercially dried egg white is less expensive than fresh eggs.

Time—Saving time is an important factor to working homemakers. Consider whether time or cost is more important to your daily budget.

Product quality—Ready-mixes are set up to make a standard quick-method product. The variations that arise are usually inherent in the skill of the maker. The only other factor might be too long shelf life before the mix was purchased. The mix might then be rancid or result in a product of small volume.

FROSTING, ICING

Two Basic Types

Is a cake "frosted" or "iced" at your house? Whatever you call it (either is correct), you will want to know how to make and put this final touch to your cake picture. Creamy icings made of shortening and confectioners sugar are popular for some cakes. You may like the fluffy icing made with egg white and sugar. Learn to make these two basic kinds of frosting and you can create variations to please your palate.

CREAMY ICING

(Yield: Icing for two 9" layers)

2 tablespoons water
4 tablespoons granulated sugar
2-1/3 cups sifted confectioners sugar
1/4 teaspoon salt
1 egg
1/2 cup shortening
1 teaspoon vanilla

Boil water and granulated sugar together for a few minutes. Mix confectioners sugar, salt and egg. Blend with syrup. Add shortening and vanilla. Beat until creamy.

For Creamy Chocolate Icing, stir in 2 squares melted chocolate before icing the cake.

BOILED ICING

(Yield: Icing for two 9" layers)

1-1/2 cups sugar
1/2 cup water
1 tablespoon light corn syrup
1/2 teaspoon salt
2 egg whites
1 teaspoon vanilla

Cook sugar, water, salt and corn syrup in a saucepan and over low heat, stirring until sugar is dissolved; cover pan and boil for about 3 minutes. Boil without stirring to 242–244 F or until a small amount forms a firm ball in cold water. Uncover and beat egg whites until stiff. Remove from heat and pour slowly over beaten egg whites, beating constantly. Add flavoring. Continue beating until icing is of consistency to spread.

An adaptation of the boiled icing is the shortcut Fluffy Frosting.

FLUFFY FROSTING

1 cup sugar
1 raw egg white
1/4 teaspoon cream of tartar
1/2 cup boiling water
1 teaspoon vanilla
Few grains salt

Mix sugar, egg white and cream of tartar together. Add boiling water, beat with electric mixer at highest speed until stiff (about 5 minutes). This frosting does not become crusty and can be stored in the refrigerator. It is excellent sprinkled with coconut on the quick method yellow cake, page 8.

How To Frost a Cake

Icing should be just ready to "set" when applied to cake. If too soft, it will run off; if too thick, it will not spread easily and will break a tender cake. Cake should be cooled before icing.

Use a spatula to spread the icing on the cake. Spread filling or frosting between layers. Then use the spatula, held in a vertical position, to spread icing from bottom toward top before top is iced. Place a liberal portion of icing on the top and spread it with a swirling motion over the cake.

The finished cake should give a feeling of height with sides as nearly perpendicular as possible to the unevenly swirled top.

Reference: "Better Baking," prepared by the Home Economics Department, Procter & Gamble, Ivorydale, Ohio.

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