CHAPTER 2

CAKES

Cake Baking

Condition	You will be provided a galley area and appropriate equipment.
Standard	All personnel must know how to bake a cake.
Preparing Cakes	When making any product in the bakeshop, certain procedures must be followed. There are five steps in preparing cakes as listed below: • Mixing • Panning • Baking • Frosting • Finishing

Continued on next page

Mixing

When mixing batter type cakes, the size of the mixing bowl is determined by the amount of batter needed. There should be just enough batter in the bowl to cover the mixing paddle. The shortening should **not** be too hard or too soft. The two-stage method is preferred because it is simple and there is less likelihood of error. Follow the steps below to complete the two-stage method:

Stage One

Follow the steps below to complete stage one of the two-stage method.

Step	Action
1	Sift together all dry ingredients twice.
2	Place the sifted ingredients, shortening, milk, and the main portion of water into the mixing bowl.
3	Mix at a low speed until all ingredients are combined for 3 minutes.
4	After mixing, the temperature of the batter should be 72°F to 78°F.
5	Stop and scrape the bowl thoroughly. Scraping the bowl periodically keeps dry ingredients from sticking to the bowl.

Stage Two

Follow the steps below to complete stage two.

Step	Action
1	Combine eggs, remaining water, and flavoring.
2	Add the combined ingredients slowly while mixing at low speed.
3	Stop and scrape the bowl thoroughly. Continue to mix at medium speed for 3 more minutes.

Canned Cake Mixes

When using canned cake mixes, follow the manufacturer's instructions for mixing the cake. These instructions will yield the best possible product. When in doubt about the proper mixing procedure for any cake product, refer to Section G of the Armed Forces Recipe Service.

Continued on next page

Panning

When panning cake batter, always use the type and size of cake pan required. Some panning rules are as follows:

- Use pan preparation instructions given in the recipe or in the directions on the container.
- Leave cake pans ungreased or grease with or without a liner.
    - Grease pans with a mixture of flour and shortening, which is known as *dobie.*
    - Warm the dobie when the weather is cold to help make it spread easily.
- Follow the panning instructions for the amount of batter required per pan.
- Scale or measure the batter and spread it evenly in the pan.
- Weights are more accurate than measures.
- Scrape the scale scoop or the measuring device clean of batter to maintain accuracy when putting the batter in the pan.

Continued on next page

Cake Baking, Continued

Baking

Bake the cake at the temperature shown in the recipe. Use an oven thermometer occasionally to make sure the oven temperature is accurate and even throughout. Some baking rules are as follows:

- Place the pans in the oven with room for air to circulate.
    - If using a rotating oven, be sure to check the shelves occasionally to ensure they are level.
    - Be careful not to jar the pans during the baking process or the cakes may fall.
- Bake the cake for the amount of time prescribed in the recipe.
- Test the degree of doneness of the cake by lightly touching the cake near the center. If an indentation remains, the cake is **not** done. Bake it another 3 to 5 minutes and retest it.
- Remove the cake from the oven after it is baked and place it on a rack to cool for 10 minutes.
- Turn layer cakes onto paper dusted lightly with cornstarch or powdered sugar.
    - When using cornstarch, keep in mind too much can cause a bitter taste.
    - Granulated sugar can be used, but will cause the frosting to be grainy.
- Turn sheet cakes onto inverted pans covered with paper dusted lightly with cornstarch or powdered sugar.

Continued on next page

Frosting

Once a cake has been removed from the oven and cooled, it should be frosted as soon as possible. Frostings give cake eye appeal and improve taste. They also improve the keeping quality of the cake by slowing the loss of moisture. If the cake is still warm when you frost it, moisture may condense between the crust and frosting and the crust will become soggy. Some frosting rules are as follows:

- Cooked or uncooked frosting may be used, depending upon the recipe.
- Chocolate and vanilla frosting mixes are available.
- Thin stiff frosting by adding water or syrup, or by warming the frosting.
    - A marshmallow type frosting should not be thinned.
    - Adding water slows drying of the frosting.
- Use only the amount of flavoring in frosting that is needed so as not to detract from the taste of the cake.
- Mix food coloring with a small amount of frosting and then add the colored frosting to a larger amount of uncolored frosting until the desired color is obtained.
- Use meringue powder for egg white when making a foam-type icing. Follow the directions on the can and use a volume of powder and water equal to the volume of unbeaten egg whites.

For further guidance on cake frosting; refer to the Armed Forces Recipe Service. Remember the importance of following recipes exactly.

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Finishing

The final step of cake preparation is finishing the product. The finished product may be a 9-inch layer cake, two sheet cakes, or one sheet cake cut in half. Some finishing rules are as follows:

- Remove all loose crumbs and, if necessary, trim the cake using a sharp knife to remove any hard or jagged edges.
- Frost a layer cake by inverting the bottom with the topside down and place the thicker layer on the bottom.
- Use a spatula to spread frosting evenly over the bottom layer.
- Cover with the top layer, topside up.
- Start from the center and work outward; spread frosting on the top of the cake, then frost the sides.
- Decorate the cake as desired and serve.
- Leave sheet cakes in a pan and frost them only on top or finish them with nut toppings, coconut, cherries, or chocolate chips.

Summary

This section covered cake baking. The next section covers cake faults and possible causes.

Cake Faults and Possible Causes

Condition You will be provided with facilities and the appropriate material.

Standard Know the cake faults and possible causes.

Category During the preparation of a cake in the central pastry shop, it is possible for something to go wrong with the product. Cake faults fall under one of five different categories.

- Volume
- Symmetry
- Color
- Grain
- Eating quality

Volume The table below shows problems associated with a *volume* fault and the possible causes.

Problem	Cause
Too large	• Too many eggs • Too much leavening • Wrong shortening • Too much dry skim milk • Too much batter in pan
Too small	• Not enough leavening • Not enough eggs • Not enough shortening • Not enough sugar • Too much water • Too much sugar • Hard flour • Oven too hot • Under-baked • Over-baked

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Cake Faults and Possible Causes, Continued

Symmetry

The shape and size of the pastry product determine symmetry. Patrons come to expect that certain products will have a conventional shape. The table below shows problems associated with a *symmetry* fault and the possible causes.

Problem	Cause
Flat	• Too much water • Too much shortening • Too much leavening • Not enough leavening • Hard flour • Oven temperature too low
Concave (dropped in center)	• Too much sugar • Too much leavening • Too much shortening • Wrong shortening • Not enough eggs • Not enough water • Under-baked
Convex (peaked)	• Too many eggs • Too much flour • Not enough sugar • Not enough shortening • Oven too hot

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Cake Faults and Possible Causes, Continued

Color

The table below shows problems associated with a *color* fault and the possible causes.

Problem	Cause
Crust too dark	• Oven too hot • Over-baked • Too much top heat • Too much sugar • Too much shortening • Too many eggs • Too much milk • Wrong leavening • Not enough water • Hard flour
Crust too light	• Oven temperature too low • Under-baked • Not enough leavening • Wrong leavening • Not enough sugar • Not enough milk • Not enough shortening • Not enough eggs • Too much flour • Too much water
Crust spotted	• Improper mixing • Too much sugar

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Cake Faults and Possible Causes, Continued

Grain

The table below shows problems associated with a *grain* fault and the possible causes.

Problem	Cause
Coarse or open	• Too much leavening • Too many eggs • Wrong shortening • Not enough water • Hard flour • Oven temperature too low
Dense or close	• Not enough leavening • Not enough eggs • Not enough sugar • Not enough shortening • Too much shortening • Wrong shortening • Too much liquid • Oven too hot
Large holes (tunnels)	• Oven too hot • Wrong shortening • Improper mixing • Too much sugar • Not enough sugar
Crumbly texture	• Too much leavening • Too much sugar • Too much shortening • Too much flour • Wrong flour • Not enough eggs • Not enough water • Too much water • Oven temperature too low • Over-baked

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Cake Faults and Possible Causes, Continued

Grain, continued

Problem	Cause
Tough texture	• Too many eggs • Too much water • Too much flour • Too much milk • Not enough leavening • Not enough shortening • Not enough sugar • Oven too hot • Oven temperature too low
Texture too tender	• Too much leavening • Too much sugar • Too much shortening • Not enough flour • Not enough water • Not enough eggs • Oven temperature too low

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Cake Faults and Possible Causes, Continued

Eating Qualities

The table below shows problems associated with the *eating qualities* fault and possible causes.

Problem	Cause
Too sweet	Too much sugar
Too salty	Too much salt
Egg taste	Too many eggs
Too greasy	Too much shortening
Burnt	Over-cooked
Too bland	• Not enough salt • Not enough flavoring • Not enough sugar
Too dry	• Too much leavening • Over-baked • Not enough eggs • Not enough liquid • Oven too hot • Oven temperature too low
Tough	• Not enough sugar • Not enough leavening • Not enough shortening • Too much flour • Too many eggs • Eggs under-beaten • Batter over-mixed • Batter under-mixed

Summary

This chapter covered cake baking and possible faults. The next chapter covers cookie baking, quick breads, and possible faults.