

# Cake and Mix Recipes for High Altitudes in New Mexico

Circular 293

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#### **INTRODUCTION**

Success in baking has often been considered a measure of one's ability as a cook. Newcomers to New Mexico discover that favorite recipes don't produce a familiar, fine cake. Cakes may rise too high and flow over the top of the pan, or rise and then fall. Perhaps they are more porous and crumbly. Failures can often be explained by differences in altitude. This circular presents selected and tested recipes for elevations of 5,000, 7,500, and 10,000 ft.

As elevation increases, air pressure decreases, so recipes must be changed to compensate for the difference. The usual modification in a cake containing shortening is to reduce the baking powder. For each 2,500-ft rise in elevation, the baking powder is reduced by approximately 1/4 to 1/2 teaspoon per 2 cups of flour. Reducing sugar and increasing liquid as the elevation increases may also improve the cake. However, contrary to popular opinion, there is no set rule to use in modifying a sea-level recipe to adapt it to high-elevation use. Modifications depend upon the amounts of and relationships among the various ingredients of the original recipe. Therefore, we have collected recipes that are particularly suitable to New Mexico.

#### **TYPES OF CAKES**

General recipes that may be modified to produce other interesting products are included in this circular.

The first group consists of cakes in which egg white, egg yolk, or whole eggs are the leavening agents, such as angel food and sponge cakes. Another group is composed of cakes that contain shortening and are leavened with baking powder or soda. These may contain either whole eggs or egg whites. For variety, additional cakes, such as sour cream cakes, gingerbread, applesauce cake, carrot cake, light and dark fruit cakes, and oatmeal cake, have been included.

#### **INGREDIENTS**

Cake flour was used for most recipes. Some recipes, however, specify the use of all-purpose flour. Cake



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flour is manufactured to produce light and tender cakes. All-purpose flour will not yield as fine or light a cake. For best results, use the type of flour specified for each recipe.

Eggs should be relatively fresh and stored in the refrigerator.

# **GENERAL INSTRUCTIONS**

At higher elevations, cakes are more sensitive to slight changes. It is important to carefully follow the directions given for each recipe. Be sure that measurements are exact, and especially note the addition or subtraction of amounts from cups of flour or liquid. Always use measuring spoons or cups when definite amounts of ingredients are specified.

When measuring flour and baking powder, do not pack them, but spoon lightly into the cup or spoon and level off. Always sift flour before measuring. Brown sugar and shortening should be packed into the cup or spoon to give accurate measurements. Shortening should be at room temperature for best results.

Cakes are easier to remove from pans if waxed paper is used. Grease the pan, fit the waxed paper to the pan bottom, and grease the paper. If you prefer, dust the pan with flour after greasing. Do not grease the sides of the

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pan unless specified. After the batter has been poured into the pan, cut through it several times with a spatula to release the pockets of air that may be trapped in it and cause holes in the cake. When the cake is removed from the pan, lift the waxed paper off immediately.

Pan size is given for each recipe, although other sizes may be used if the total volume is the same.

#### **Mixing Method**

Electric mixers, both upright and portable, were used to develop these recipes. Observe recommended mixing speeds. Use medium or high speeds (depending on your mixer) for creaming shortening and sugar and adding eggs. Use low speeds for adding dry ingredients and liquid. Scrape down the sides of the bowl frequently with a rubber scraper.

Cakes made with an electric mixer will be uniform every time they are made if care is taken in measuring ingredients, mixing times are carefully watched, and baking conditions are the same.

#### **Baking Times and Temperatures**

Baking times for recipes may vary depending on the accuracy of the oven. Remove the cake when it appears to be done, whether or not the exact time specified in the recipe has elapsed. To test for doneness, press the surface of the cake lightly. If it springs back, remove cake from the oven. A cake is also done when it pulls away from

the sides of the pan. Remove the cake from the pan after it has cooled about 15 minutes and immediately pull off the waxed paper. Cool the cake completely on a wire rack before frosting or storing it.

Oven temperature regulators vary, so it is always wise to check the temperature with an oven thermometer. If the oven temperature is too high or too low, have the regulator adjusted by the dealer or learn what setting is necessary to obtain the temperature needed inside the oven.

Baking temperatures in electric and gas ovens are comparable.

# What to Expect from a Recipe

If you follow the directions carefully, each of these recipes will yield an excellent cake with the ingredients used. A cake with relatively larger amounts of sugar and fat will give a finer, more velvety type of cake than a less rich recipe. However, cakes from less rich recipes will be very acceptable.

The sponge cake should be light, springy, and slightly moist and contain relatively large air cells. The shortening-type cakes should have slightly rounded tops, a light brown surface, and a velvety, fine-grained interior.

These recipes have been tested for three specific elevations. If the elevation at which you live is not exactly 5,000, 7,500, or 10,000 ft, use the recipe adapted for the elevation closest to yours (see Table 1 on page 11).

# Angel Food Cake 5,000 ft/Preheat oven: 400°F

1 cup plus 1 tablespoon sifted cake flour

1 cup sugar

1 3/4 cups egg whites (refrigerator temperature)

1/4 teaspoon salt

2 teaspoons cream of tartar

1/2 cup sugar

1/2 teaspoon almond extract

1/2 teaspoon vanilla extract

#### **Directions**

Sift flour and sugar together three times. Place egg whites, salt, and cream of tartar into mixing bowl and beat at high speed until fairly stiff (but not stiff peak). Slowly add 1/2 cup sugar, close to beater. Add almond and vanilla extracts. Beat until quite stiff but not dry. Add sifted sugar/flour mixture by fourths. Mix on low speed 10 seconds after each of the first three additions and 20 seconds after last addition. Scrape down sides constantly while mixing. Pour batter into a 10-inch, ungreased tube pan.

Bake at 400°F, for approximately 30 minutes. Remove from oven and cool in inverted pan.

#### **Variations**

**Chocolate Angel Food Cake:** Substitute 1/4 cup sifted cocoa for 1/4 cup cake flour. Omit almond extract and increase vanilla extract to 1 1/2 teaspoons.

**Spiced Angel Food Cake:** Sift 1/2 teaspoon nutmeg, 1/4 teaspoon cloves, and 1 teaspoon cinnamon with the flour. Omit vanilla and almond extracts.

This unique variation of plain angel food is nice for an autumn dessert when served with whipped cream. A topping of whipped cream mixed with crushed peanut brittle, crushed peppermint candy, or fresh or frozen fruit is delicious on slices of angel food cake.

#### Elevation Adjustments -

7,500 ft: Increase flour to 1 cup plus 2 tablespoons. Reduce the 1 cup of sugar to 3/4 cup plus 2 tablespoons.10,000 ft: Increase flour to 1 1/4 cups. Reduce the 1 cup of sugar to 3/4 cup. Increase the baking temperature to 425°F.

# **Applesauce Cake**

5,000 ft/Preheat oven: 350°F

2 cups sifted all-purpose flour

1/2 teaspoon cinnamon

1/4 teaspoon nutmeg

1/2 teaspoon cloves

1 teaspoon baking soda

1/2 teaspoon baking powder

1/2 teaspoon salt

1 cup sugar

1/2 cup shortening (room temperature) or 1/2 cup cooking oil

1 1/4 cups applesauce (canned, sweetened)

2 eggs

1 cup raisins

1/2 cup nuts (optional)

#### **Directions**

Grease and flour bottom of pan or line with waxed paper. Reserve 1 tablespoon of flour and stir into the raisins and nuts until they are well coated. Sift and mix the flour, cinnamon, nutmeg, cloves, baking soda, baking

powder, salt, and sugar into mixer bowl. Add shortening, applesauce, and eggs. Mix 30 seconds on low speed, scraping frequently. Beat 3 1/2 minutes on medium speed, scraping bowl 3 or 4 times. Stir in flour-coated raisins and nuts. Pour batter into pans. Bake at 350°F.

One square  $9 \times 9 \times 2$ -inch pan: 35–40 minutes.

20 cupcakes (two thirds full): 20-23 minutes.

If a larger cake is desired, increase all ingredients by half and bake in  $9 \times 13 \times 2$ -inch pan for approximately 50 minutes.

Remove from oven. Immediately loosen cake from pan by running a thin spatula around the edges. Turn cake onto wire rack to cool. Cover tightly or wrap the cooled cake to prevent drying.

#### **Elevation Adjustments -**

7,500 ft: Omit baking powder. Increase baking temperature to 375°F.10,000 ft: Same as 7,500 ft.

**Burnt Sugar Cake** 5,000 ft/Preheat oven: 375°F

2 1/2 cups sifted cake flour

1 7/8 teaspoons baking powder

1/2 teaspoon salt

1 1/2 cups sugar

1/2 cup shortening (room temperature)

2 eggs (refrigerator temperature)

1 teaspoon vanilla

1 cup milk (refrigerator temperature)

3 tablespoons burnt sugar syrup

## **Directions**

Grease and flour pans or line with waxed paper. Sift and mix flour, baking powder, salt, and sugar into mixer bowl. Add shortening, eggs, vanilla, cold milk, and burnt sugar syrup. Beat 30 seconds on low speed, scraping frequently. Beat 4 1/2 minutes on high speed, scraping 4 or 5 times. Pour batter into pans. Bake at 375°F.

Oblong  $9 \times 13 \times 2$ -inch pan: 30–35 minutes.

Two layers, 9-inch: 28–30 minutes.

**24 cupcakes (half full):** approximately 25 minutes.

Remove from oven and cool in pan about 12 minutes. Remove from pan and finish cooling on rack.

**Burnt Sugar Syrup:** Stir and melt 1/2 cup sugar slowly in a heavy skillet. Allow it to brown well. Add 1/2 cup boiling water and cook until smooth. Cool before using. Leftover syrup may be used in frosting or stored in covered container in refrigerator.

## **Elevation Adjustments -**

7,500 ft: Reduce baking powder to 1 1/4 teaspoons.10,000 ft: Reduce baking powder to 7/8 teaspoon.Reduce sugar to 1 1/4 cups.

#### **Carrot Cake**

5,000 ft/Preheat oven: 350°F

2 cups plus 1 tablespoon sifted all-purpose flour

2 cups sugar

1 1/4 teaspoons baking soda

1/4 teaspoon salt

2 teaspoons cinnamon

1/2 cup cooking oil

5 eggs (extra large)

3 cups (packed) finely grated raw carrots (6–8)

#### **Directions**

Grease and flour or line with waxed paper a  $9 \times 13 \times 2$ -inch pan. Sift and mix flour, sugar, baking soda, salt, and cinnamon into mixer bowl. Add oil and blend 1 minute on low speed. Add eggs, one at a time, and beat on medi-

um speed for 30 seconds after each. Add carrots and mix on low speed about 20 seconds. Pour batter into pan. Bake at 350°F about 50 minutes or until done. Remove from oven and allow to cool in pan about 12 minutes. Remove from pan and frost with cream cheese frosting.

Cream Cheese Frosting: Soften and blend together 1/2 cup (1 stick) of margarine and one 8-ounce package cream cheese. Sift a 1-pound box of confectioner's sugar



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and gradually add to the margarine and cheese mixture. Blend well. Add 1/2 cup chopped nuts, if desired. Add a few drops of milk if frosting is too stiff.

# Elevation Adjustments -

7,500 ft: Same as 5,000 ft.

10,000 ft: Reduce baking soda to 1 teaspoon.

## **Chiffon Cake**

5,000 ft/Preheat oven: 350°F

2 1/2 cups sifted cake flour

1 1/2 cups sugar

1 1/2 teaspoons baking powder

1 teaspoon salt

1/2 cup cooking oil (room temperature)

4 egg yolks, unbeaten (refrigerator temperature)

3/4 cup cold water

2 teaspoons vanilla extract

1 cup egg whites (6–7 extra large)

1/2 teaspoon cream of tartar

#### **Directions**

Mix and sift flour, sugar, baking powder, and salt into mixer bowl. Make a well in the center and add oil, egg yolks, water, and vanilla. Mix 1 minute on low speed of upright mixer or medium speed of portable mixer, scraping frequently. Place egg whites and cream of tartar in another mixer bowl. Using clean beaters, beat to stiff peaks but not dry. Add beaten eggs whites to batter by thirds. With a rubber spatula, fold 15 strokes after the first and second addition and 25 strokes after the third.

Pour batter into an ungreased, 10-inch tube pan. Bake at 350°F for 55–65 minutes or until done. Remove from oven and cool in inverted pan.

## - Elevation Adjustments -

**7,500 ft:** Same as 5,000 ft.

**10,000 ft:** Plain Chiffon: Reduce baking powder to 1 teaspoon. Orange Chiffon: Reduce baking powder to 3/4 teaspoon. Lemon or Pineapple Chiffons: Same as 5,000 ft.

#### **Variations**

**Lemon Chiffon Cake:** In place of the 3/4 cup cold water, substitute 1/2 cup plus 2 tablespoons cold water and 2 tablespoons strained lemon juice. Omit vanilla and add 1 tablespoon grated lemon zest.

**Orange Chiffon Cake:** In place of the 3/4 cup cold water, substitute 1/2 cup cold water and 1/4 cup strained orange juice. Omit vanilla and add 1 tablespoon grated orange zest.

**Pineapple Chiffon Cake:** In place of the 3/4 cup cold water, substitute 3/4 cup cold, unsweetened pineapple juice.

#### **Chocolate Cake**

5,000 ft/Preheat oven: 350°F or 375°F

- 2 1/2 ounces unsweetened chocolate, melted
- 2/3 cup shortening
- 2 cups sifted cake flour
- 2 teaspoons baking powder
- 1/2 teaspoon salt
- 1 1/3 cups sugar
- 1 teaspoon vanilla extract
- 3 eggs (refrigerator temperature)
- 1 cup milk (refrigerator temperature)

#### **Directions**

Grease and flour pans or line with waxed paper. Melt chocolate and shortening and cool slightly. Sift and mix flour, baking powder, salt, and sugar into mixer bowl. Add chocolate/shortening mixture, vanilla,

eggs, and milk. Beat 30 seconds on low speed, scraping frequently. Beat 7 1/2 minutes on medium-high speed of an upright mixer or 6 minutes at high speed with a portable mixer, scraping 4–5 times. Pour batter into pans and bake.

**Oblong 9 × 13 × 2-inch pan:** 350°F for approximately 30–35 minutes.

**Two layers, 8-inch:** 375°F for approximately 28 minutes.



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**24 cupcakes (two thirds full):** 375°F for approximately 25 minutes.

Remove from oven and cool in pan about 12 minutes. Remove from pan and finish cooling on rack.

# Elevation Adjustments -

**7,500 ft:** Reduce baking powder to 1 3/4 teaspoons. **10,000 ft:** Reduce baking powder to 1 1/2 teaspoons. Increase milk to 1 cup plus 1 tablespoon.

# **Chocolate Sour Cream Cake** 5,000 ft/Preheat oven: 350°F

2 ounces unsweetened chocolate

1/4 cup hot water

1 3/4 cups sifted cake flour

3/4 teaspoon baking soda

1/2 teaspoon salt

1 1/2 cups sugar

3 eggs (refrigerator temperature)

1 cup commercial sour cream (8 ounces) (refrigerator temperature)

1 teaspoon vanilla extract

#### **Directions**

Grease and flour or line pans with waxed paper. Melt chocolate in hot water over low heat and cool. Sift and mix flour, soda, salt, and sugar; set aside. Beat eggs at high speed until thick and lemon-colored. Combine cooled chocolate mixture with sour cream and vanilla. Add this mixture and the sifted dry ingredients to the beaten eggs. Beat 30 seconds on low speed, scraping frequently. Beat 3 minutes on medium-high speed of upright mixer or 3 minutes at high speed of portable mixer, scraping several times. Pour batter into pans. Bake at 350°F.

**Two layers, 8-inch:** 27–32 minutes.

**18 cupcakes (two thirds full):** approximately 29 minutes.

# Elevation Adjustments -

**7,500 ft:** Reduce baking soda to 5/8 teaspoon. Increase baking temperature to 375°F.

**10,000 ft:** Reduce baking soda to 5/8 teaspoon. Increase baking temperature to 375°F.

# **Dark Fruit Cake** 5,000 ft/Preheat oven: 275°F Yield: About 7 1/2 pounds

1 lb pitted dates 1/2 lb candied pineapple 3/4 lb diced candied citron 1/4 lb diced candied orange peel 3/4 lb diced candied lemon peel 1/2 lb currants 1 lb raisins 1/2 lb candied cherries 1/2 lb almonds, blanched and slivered 1/2 lb pecan halves 3 cups sifted all-purpose flour 1 1/2 teaspoons cinnamon 1 teaspoon nutmeg 1/2 teaspoon allspice 1/2 teaspoon salt 1 cup shortening 1 cup sugar 6 eggs, beaten 1/2 cup orange juice 1/2 cup honey



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#### **Directions**

Grease five  $7.1/2 \times 3.3/4 \times 2.1/4$ -inch pans and line with paper (waxed, brown, or parchment). Cut paper to fit bottoms of pans. Cut strips to extend 1/4 inch above pan sides. Fit into pans and grease inside of papers. Cut papers to fit over tops of pans and grease on one side.

Slice dates and pineapple. Add citron, orange peel, and lemon peel. Leave currants, raisins, and cherries whole. Place all fruit and nuts in a large mixing bowl.

Sift and measure flour, reserving 1 cup. Sift and mix remaining 2 cups flour with cinnamon, nutmeg, all-spice, and salt. Add the 1 cup of reserved flour to the fruit and nuts and mix until all pieces are evenly coated.

Blend orange juice with honey. Cream shortening until light. Gradually add sugar and cream until light and fluffy. Add beaten eggs and mix thoroughly. Beat in alternately the flour mixture and orange juice mixture. Mix well after each addition. Pour batter over floured fruit and nuts and blend thoroughly to distribute fruit and nuts evenly.

Pack mixture to within 3/4 inch of top of pans, which have been greased and lined with paper as described earlier. Round cake mixture slightly on top when packing into pans. Cover tops of pans with paper, greased side toward batter.

Bake cakes in preheated oven at 275°F for about 2 1/2 hours or until done. Lift papers from tops of pans the last few minutes of baking if cakes need to brown

more. Remove cakes from oven. Set pans on racks and allow to cool 20 minutes.

Remove cakes from pans and carefully take off paper. When completely cooled, cakes may be glazed and decorated before wrapping for storage, or they may be wrapped in a brandy soaked cloth and stored in plastic bags. When slicing cake, use a very sharp knife to avoid tearing fruit and nuts.

# Elevation Adjustments -

**7,500 ft:** Increase eggs to 7. **10,000 ft:** Same as 7,500 ft.

#### Glaze for Fruit Cake

1/2 cup orange juice 1/2 cup light corn syrup

Bring orange juice and syrup to a rolling boil. Use pastry brush to cover cake with hot glaze. Immediately decorate with fruit and nuts. Bring mixture back to boil and again brush hot glaze over cakes. Let glaze dry before wrapping cake for storage.

# Storage

When completely cool, cakes may be wrapped first in waxed paper, then in aluminum foil. If preferred, cakes may be wrapped in cheesecloth soaked in brandy or wine, then wrapped in foil. Store cakes in a cool place for at least a week before serving.

# **Egg Yolk Sponge Cake**

5,000 ft/Preheat oven: 350°F

12 egg yolks

1/2 teaspoon salt

1/2 teaspoon cream of tartar

1 teaspoon vanilla extract

1 teaspoon lemon extract

1/2 cup plus 1 tablespoon water

1 cup sugar

1 1/2 cups plus 1 1/2 tablespoons sifted cake flour

#### **Directions**

Place egg yolks, salt, cream of tartar, and vanilla and lemon extracts in mixer bowel and beat until blended. Beat at high speed while gradually adding the water.

Add sugar slowly and continue beating at high speed until thick and lemon colored. This will take 3 minutes or more total beating time.

Sift in 1/4 of the flour over mixture and beat 10 seconds on low speed. Sift in remainder of flour and beat 20 seconds on low speed.

Pour batter into an ungreased 8-inch tube pan. Bake at 350°F for 40–50 minutes. Remove from oven and cool in inverted pan.

# -Elevation Adjustments -

**7,500 ft:** Increase flour to 2 cups minus 1 1/2 teaspoons. **10,000 ft:** Increase flour to 2 cups plus 2 1/2 tablespoons. Increase water to 3/4 cup minus 1 1/2 tablespoons. Increase baking temperature to 375°F.

# **Fudge Cake**

5,000 ft/Preheat oven: 350°F

4 ounces unsweetened chocolate

1/2 cup shortening

2 cups sifted cake flour

2 teaspoons baking powder

1 teaspoon salt

2 1/4 cups sugar

1 1/2 cups milk (refrigerator temperature)

3 eggs (refrigerator temperature)

2 teaspoons vanilla extract

1 cup nuts, chopped and floured (optional)

#### **Directions**

Grease and flour pans or line with waxed paper. Melt chocolate and shortening together and cool slightly. Sift and mix flour, baking powder, salt, and sugar into mixer bowl. (Reserve 1 tablespoon for flouring nuts, if used.) Add milk, eggs, and vanilla. Beat 30 seconds on

low speed, scraping frequently. Add melted and slightly cooled chocolate shortening mixture. Beat 7 1/2 minutes on medium high speed of upright mixer or 7 1/2 minutes on high speed of portable mixer, scraping several times.

Stir in floured nuts, if used; pour batter into pans. Bake at 350°F. Remove from oven and cool in pan about 12 minutes. Remove from pan and finish cooling on rack.

Two layers, 8-inch: approximately 48 minutes.

28 cupcakes (two thirds full): 30–35 minutes.

# Elevation Adjustments -

**7,500 ft**: Reduce baking powder to 1 1/2 teaspoons. Increase baking temperature to 375°F. **10,000 ft**: Reduce baking powder to 1 1/2

**10,000 ft**: Reduce baking powder to 1 1/2 teaspoons. Reduce sugar to 2 cups. Increase baking temperature to 375°F.

#### **Gingerbread**

5,000 ft/Preheat oven: 350°F

2 1/3 cups sifted all-purpose flour

3/4 teaspoon baking soda

1/2 teaspoon salt

1/4 teaspoon cinnamon

1/4 teaspoon nutmeg

1/4 teaspoon allspice

1 teaspoon ginger

1/2 cup sugar

1/2 cup shortening (room temperature) or cooking oil

2 eggs

3/4 cup molasses

2/3 cup water

#### **Directions**

Grease and flour the bottom of a 9 × 9 × 2-inch pan. Sift and mix flour, soda, salt, cinnamon, nutmeg, allspice, ginger, and sugar into mixer bowl. Be sure all ingredients are at room temperature. Add shortening, eggs, molasses, and water. Beat 30 seconds on low speed, scraping frequently. Beat 3 minutes on medium speed, scraping 4 or 5 times. Pour batter into pan. Spread from center so batter is slightly higher at edges. Bake at 350°F for 40–45minutes. Leave in pan and cut in squares. Serve warm.

### Elevation Adjustments -

**7,500 ft:** Reduce soda to 1/2 teaspoon. Increase baking temperature to 375°F.

**10,000 ft:** Reduce soda to 1/2 teaspoon and sugar to 1/3 cup. Increase baking temperature to 375°F.



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# **Light Fruit Cake** 5,000 ft/Preheat oven: 275°F Yield: About 5 pounds

1/2 lb dried apricots

1/2 lb candied pineapple

1/2 lb candied cherries

1/2 lb pecan halves

3/4 lb almonds, blanched and slivered

1/4 lb Brazil nuts

1/4 lb diced candied citron

1/4 lb white raisins

1/4 lb diced candied orange peel

1/4 lb diced candied lemon peel

2 cups sifted all-purpose flour (reserve 1/2 cup of flour to mix with fruit and nuts)

1/4 teaspoon salt

2/3 cup sugar

4 eggs

1/3 cup orange juice

1/3 cup honey

1 cup flaked coconut

2/3 cup shortening

#### **Directions**

Grease four  $7 1/2 \times 3 3/4 \times 2 1/4$ -inch pans and line with paper (waxed, brown, or parchment). Cut paper to fit bottoms of pans. Cut strips to extend 1/4 inch above pan sides. Fit into pans and grease inside of papers. Cut papers to fit over tops of pans and grease on one side.

Dice apricots. Cover with water and bring to boil to soften. Drain well. Dice pineapple.

Sift and measure the flour, reserving 1/2 cup. Add salt to remaining 1 1/2 cups flour and sift. Place all the fruit and nuts in a large mixing bowl. Add the 1/2 cup of flour reserved for that purpose and mix until all pieces are evenly coated.

Blend orange juice with honey. Cream shortening and sugar until light and fluffy. Add unbeaten eggs one at a time, mixing thoroughly after each addition. After last egg has been added, continue beating until batter is well blended. Beat in the flour mixture and orange juice mixture alternately. Mix well after each addition. Add coconut to fruit and nut mixture. Pour batter into this mixture and blend thoroughly to distribute fruit and nuts evenly.

Pack mixture to within 3/4 inch of top of pans, which have been greased and lined with paper as described earlier. Round cake mixture slightly on top when packing into pans. Cover tops of pans with paper, greased side toward batter.

Bake cakes in preheated oven at 275°F for about 2 hours or until done. Papers may be removed from tops of pans the last few minutes of baking if cakes need to brown more. Remove cakes from oven. Set pans on racks and allow to cool 20 minutes. Remove cakes from pans and carefully take off paper.

When completely cooled, cakes may be glazed and decorated before wrapping for storage, or they may be wrapped in a brandy-soaked cheesecloth and stored in plastic bags (see directions on page 6). When slicing cake, use a very sharp knife to avoid tearing fruit and nuts.

#### **Elevation Adjustments**

**7,500 ft**: Increase eggs to 5. **10,000 ft**: Same as 7,500 ft.

#### **Oatmeal Cake**

5,000 ft/Preheat oven: 350°F

1 1/4 cups boiling water

1 cup quick-cook oats

1/2 cup margarine (1 stick)

1 cup firmly packed brown sugar

1 teaspoon vanilla

3 eggs

1 cup granulated sugar

1 1/2 cups sifted all-purpose flour

1 teaspoon baking soda

1/2 teaspoon salt

3/4 teaspoon cinnamon

1/4 teaspoon nutmeg

#### **Directions**

Pour boiling water over oats in mixer bowl; cover and let stand 20 minutes. Grease and flour the bottom of a  $9 \times 9 \times 2$ -inch pan. Add margarine, brown sugar,

vanilla, and eggs to water-oat mixture. Beat 1 minute on medium speed of upright mixer or high speed of portable mixer. Sift and mix sugar, flour, soda, salt, cinnamon, and nutmeg. Add to wet ingredients and mix 1 minute on low speed. Pour batter into pan and bake about 50 minutes or until done. Frost hot cake in pan with frosting. Turn oven to broil, return frosted cake to oven, and broil until frosting is bubbly and lightly browned.

#### **Oatmeal Cake Frosting:**

1/4 cup (1/2 stick) margarine or butter, melted 1/2 cup firmly packed brown sugar



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3 tablespoons cream (or undiluted evaporated milk) 1/3 cup chopped nuts 3/4 cup shredded coconut

Blend together margarine, brown sugar, and cream. Mix in chopped nuts and shredded coconut. Spread on top of hot cake. Broil until bubbly.

#### **Elevation Adjustments -**

**7,500 ft:** Same as 5,000 ft. **10,000 ft:** Same as 5,000 ft.

#### White Cake

5,000 ft/Preheat oven: 375°F

2 1/2 cups sifted cake flour

2 1/2 teaspoons baking powder

1/2 teaspoon salt

1 1/2 cups plus 1 tablespoon sugar

1/2 cup plus 2 tablespoons shortening (room temperature)

1 1/4 teaspoons vanilla extract

1 cup plus 3 tablespoons milk (refrigerator temperature)

5 egg whites (refrigerator temperature)

#### **Directions**

Grease and flour pans or line bottom of pans with waxed paper. Sift and mix flour, baking powder, salt, and sugar into mixer bowl. Add shortening, vanilla, milk, and egg whites. Beat 30 seconds on low speed, scraping frequently. Beat 7 1/2 minutes on high speed, scraping twice. Pour batter into pans and bake at 375°F.

**Oblong 9**  $\times$  **13**  $\times$  **2-inch pan**: 30–35 minutes.

Two layers, 8-inch: 25-28 minutes.

**24 cupcakes (half full):** 23–25 minutes.

Remove from oven and cool in pan about 12 minutes. Remove from pan and finish cooling on rack.

#### - Elevation Adjustments -

**7,500 ft**: Same as 5,000 ft.

**10,000 ft:** Reduce baking powder to 1 1/2 teaspoons. Reduce sugar to 1 1/2 cups minus 1 tablespoon.

#### White Oil Cake

5,000 ft/Preheat oven: 375°F

2 1/4 cups sifted cake flour

1 1/4 teaspoons baking powder

1/2 teaspoon salt

1/2 cup cooking oil

1/2 cup minus 1 tablespoon milk

1/2 cup water

1 teaspoon vanilla extract

1/2 cup egg whites (3-4)

1/4 teaspoon cream of tartar

1 cup sugar

#### **Directions**

Grease and flour or line two 8-inch layer pans with waxed paper. Sift and mix flour, baking powder, and

salt into mixer bowl. Add oil, milk, water, and vanilla. Beat 2 minutes on medium speed, scraping frequently. In separate mixing bowl, beat egg whites and cream of tartar until stiff but not dry. Gradually add sugar to beaten egg whites and beat to a stiff meringue. Add meringue to batter and fold in, using about 40 strokes. Pour batter into pans. Bake at 375°F for approximately 27 minutes. Remove from oven and cool in pans about 12 minutes. Remove from pans and finish cooling on rack.

# **Elevation Adjustments**

7,500 ft: Same as 5,000 ft.

**10,000 ft**: Decrease sugar to 1 cup minus 1 tablespoon. Increase egg whites to 1/2 cup plus 2 tablespoons.

# Whole Egg Sponge Cake 5,000 ft/Preheat oven: 350°F

6 egg yolks (refrigerator temperature)

1 1/2 tablespoons water

1 teaspoon vanilla extract

1 1/2 tablespoons lemon juice. (For a stronger lemon flavor, use 3 tablespoons lemon juice and omit water.)

1 tablespoon grated lemon zest

1 cup sugar

1 1/4 cups plus 1 tablespoon sifted cake flour

1/2 teaspoon salt

6 egg whites (refrigerator temperature)

1/2 teaspoon cream of tartar

#### **Directions**

Place egg yolks, water, vanilla, lemon juice, and lemon zest in mixer bowl. Beat at high speed. Gradually add

the sugar and continue beating until batter is thick and lemon-colored (approximately 2–3 minutes), scraping frequently. Add the flour and salt and beat 1 minute on low speed, scraping frequently. Beat egg whites and cream of tartar in separate bowl to form very stiff but not dry peaks. Add beaten egg whites by thirds to batter and fold about 10 strokes after the first two additions and about 15 strokes after the third addition. Pour batter into an ungreased 8-inch tube pan. Bake at 350°F for about 40–50 minutes. Remove from oven and cool in inverted pan.

# Elevation Adjustments

7,500 ft: Same as 5,000 ft.

**10,000 ft:** Increase flour to 1 1/4 cups plus 2 tablespoons.

#### **Yellow Cake**

5,000 ft/Preheat oven: 350°F or 375°F

3 cups sifted cake flour

2 1/2 teaspoons baking powder

1 teaspoon salt

1 1/2 cups sugar

1 cup shortening (room temperature)

1 1/4 cups plus 2 tablespoons milk (refrigerator temperature)

2 teaspoons vanilla extract

4 eggs (refrigerator temperature)

#### **Directions**

Grease and flour or line bottom of pans with waxed paper. Sift and mix flour, baking powder, salt, and sugar into mixer bowl. Add shortening, milk, vanilla, and eggs. Beat 30 seconds on low speed, scraping frequently.

Beat 7 1/2 minutes on high speed of portable mixer. Pour batter into pans and bake.

**Oblong 9** × **13** × **2-inch pan:** 350°F for approximately 40 minutes.

Three layers, 8-inch: 375°F for 25 minutes.

**36 cupcakes (half full):** 375°F for approximately 20 minutes.

Remove from oven and allow to cool in pans about 12 minutes. Remove from pans and allow to finish cooling on rack.

# **Elevation Adjustments**

7,500 ft: Same as 5,000 ft.

10,000 ft: Reduce baking powder to 1 1/8 teaspoons.

#### **FROSTINGS**

**NOTE**: If any of the frostings seem a little thin, gradually add additional confectioner's sugar until the correct spreading consistency is reached.

# **Chocolate Frosting**

# Melt together:

3 tablespoons shortening (hydrogenated shortening, margarine, or butter)

3 ounces unsweetened chocolate

#### Blend in:

1/3 cup milk

1 teaspoon vanilla extract

1/4 teaspoon salt

2 cups sifted confectioner's sugar

Stir until smooth. Place bowl in ice water and beat until thick enough to spread.

# **Cocoa Frosting**

# Sift together:

1/3 cup cocoa

2 2/3 cups confectioner's sugar

#### Add.

1/3 cup soft butter or margarine

3–4 tablespoons milk

Stir until well blended and of spreading consistency.

# White Frosting

#### Melt in saucepan:

1/2 cup shortening (hydrogenated shortening, margarine, or butter)

#### Remove from heat and blend in:

2 1/2 tablespoons flour

1/4 teaspoon salt

#### Stir in slowly:

1/2 cup milk

Bring to a boil, stirring constantly. Boil 1 minute.

Remove from heat.

### Stir in:

1/2 teaspoon vanilla extract

3 cups sifted confectioner's sugar

Place pan in ice water and beat until thick enough to spread.

Table 1. Elevations of Cities and Towns in New Mexico								
City/Town	Elevation (ft)	City/Town	Elevation (ft)					
Alamogordo	4,350	Logan	3,830					
Albuquerque	5,000	Lordsburg	4,250					
Artesia	3,350	Los Alamos	7,400					
Aztec	5,650	Los Ranchos de	4,950					
Bayard	5,800	Albuquerque						
Belen	4,800	Lovington	3,900					
Bernalillo	5,050	Magdalena	6,556					
Bosque Farms	4,864	Melrose	4,599					
Carlsbad	3,100	Mora	7,200					
Carrizozo	5,450	Mosquero	5,550					
Chama	7,900	Mountainair	6,500					
Cimarron	6,450	Portales	4,010					
Clayton	5,050	Raton	6,650					
Cloudcroft	8,650	Reserve	5,749					
Clovis	4,300	Rio Rancho	5,290					
Columbus	4,020	Roswell	3,600					
Corona	6,664	Roy	5,900					
Corrales	5,005	Ruidoso	7,000					
Cuba	7,000	San Jon	4,200					
Deming	4,300	Santa Fe	7,000					
Dexter	3,500	Santa Rita	6,300					
Eagle Nest	8,250	Santa Rosa	4,600					
Elida	4,345	Silver City	5,900					
Española	5,600	Socorro	4,600					
Estancia	6,100	Springer	5,800					
Farmington	5,400	Taos	7,000					
Fort Sumner	4,050	Texico	4,150					
Gallup	6,500	Tierra Amarilla	7,460					
Grants	6,450	Truth or	4,250					
Hobbs	3,650	Consequences						
Hurley	5,700	Tucumcari	4,100					
Jemez Springs	6,200	Tularosa 4,500						
Las Cruces	3,900	Vaughn 5,950						
Las Vegas	6,450	Wagon Mound 6,200						

# **Burnt Sugar Frosting**

#### Melt in sauce pan:

1/2 cup butter (if desired, brown butter for additional flavor)

# Remove from heat and blend in:

2 1/2 tablespoons flour

1/4 teaspoons salt

#### Stir in slowly:

2 tablespoons burnt sugar syrup (see directions for Burnt Sugar Cake)

6 tablespoons milk

Bring to boil, stirring constantly. Boil 1 minute. Remove from heat.

#### Stir in:

1/2 tsp vanilla extract

3 cups sifted confectioner's sugar

Place pan in ice water and beat until thick enough to spread.

# HOMEMADE MIXES FOR HIGH-ALTITUDE BAKING

Why use a mix? Mixes are convenient. Baking is quicker and simpler with mixes. Moreover, a homemade mix uses your favorite flour, baking powder, shortening, and other ingredients, as well as fresh milk, butter, and eggs (Table 2). Thus, you can economize and be certain of the ingredients' freshness.

# Proportions for 13 cups of all-purpose mix for 5,000 feet

- 9 cups all-purpose flour (sift before measuring)
- 3 tablespoons baking powder (double-acting)
- 1 tablespoon salt
- 1/4 cup sugar
- 2 cups hydrogenated shortening (does not require refrigeration)

#### **Directions**

Stir the baking powder, salt, and sugar into flour. Sift together three times into a large mixing bowl or onto a large piece of plain paper. Cut in shortening with a pastry blender or two knives until the mix is the consistency of cornmeal. Store in tightly covered containers at room temperature. To measure the mix, pile it lightly into standard measuring cup and level off.

## Elevation Adjustments -

**7,500 ft**: Decrease baking powder to 2 tablespoons plus 3/4 teaspoon.

**10,000 ft:** Decrease baking powder to 1 tablespoon plus 1 1/2 teaspoons.

Table 2.	Table 2. Quick Mix Recipes									
Other ingredients to add										
Product	All- purpose mix	Milk	Egg	Sugar	Water	Fat	Flavoring			
Biscuits	3 cups	2/3 cup								
Shortcake	3 cups	1/2 cup	1	3 Tbsp						
Muffins	3 cups	1 cup	1	2 Tbsp						
Pancakes	3 cups	1 1/2 cups	2							
Pastry	2 cups				1/4 cup	1/4 cup	1 tsp			
Cookies, vanilla	3 cups	3/4 Tbsp	1	1 cup						

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