

USING NONFAT DRY MILK SOLIDS  
IN HOME PREPARED FOODS  
I. QUICK BREADS AND COOKIES

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MARCH 1952

Columbia, Missouri

BULLETIN 571

## FOREWORD

A great deal of experimental work has been done with nonfat dry milk solids, but the results of this research have been applied chiefly to problems of industrial food preparation. As part of a project entitled "Studies to Promote Utilization of Processed Food and Food Improvers," workers in the food research laboratory of the Home Economics Department at the University of Missouri have investigated methods of using nonfat dry milk solids in food products suitable for preparation in the home.

The results of the research reported in this bulletin include: suggestions for incorporating nonfat dry milk solids in prepared foods; tested recipes using high proportions of nonfat dry milk solids; and recommendations for enriching similar recipes.

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# USING NONFAT DRY MILK SOLIDS IN HOME PREPARED FOODS

## I. QUICK BREADS AND COOKIES

LETA G. MAHARG AND MARGARET MANGEL

### INTRODUCTION

#### **Milk an Important Food**

Fluid whole milk has long been recognized as an essential food in the American diet. It provides high quality protein, minerals and vitamins essential for growth and health. Not only is it an excellent food within itself, but it contributes to the flavor, texture and nutritive value of many favorite foods.

#### **A New Form of Milk**

Numerous attempts have been made to produce forms of milk which can be held for long periods without deterioration since the fluid milk supply is seasonal. The most recent of these has been the development of dried milk products. Both dried whole and dried skim milk are now available. These dried products are comparable in nutritive value to the fluid milk from which they are made. The dry skim milk has the advantage of keeping without refrigeration. This product is now known as nonfat dry milk solids. It is being prepared in increasing amounts for human consumption.

#### **Use in Commercial Food Preparation**

Industry has been quick to capitalize on this form of milk. At the present time about 97 per cent of nonfat dry milk solids prepared for human consumption is used by commercial firms in producing baked goods, candies, various dairy products, prepared mixes and other products for the retail market.

#### **Use in Home Food Preparation**

Although fluid milk is not always available and although the homemaker has been able to purchase one pound packages at the grocery, or five and ten pound lots at the bakery for over two years, she has been slow to supplement her milk supply with nonfat dry milk solids. This means she is buying foods containing nonfat dry milk solids but is not using it extensively in the products she prepares at home.

It is hoped in this bulletin to provide information and encouragement for the homemaker so that nonfat dry milk solids will have its place on the pantry shelf along with other staple products, as sugar and flour.

## ADVANTAGES IN USING NONFAT DRY MILK SOLIDS

The homemaker who uses nonfat dry milk solids will soon learn to appreciate its many advantages. Listed here are six.

### This Product Is:

1. *Nutritious* because it is possible to incorporate into a recipe more milk solids in the dry than fluid form, thus providing a means of improving the nutritive value of the diet.
2. *Available* in most communities and at times of the year when the fresh milk supply may be low. It does not deteriorate when cared for properly.
3. *Convenient* to use since it may be added to many recipes by combining with dry ingredients.
4. *Safe* since heat treatment occurring during drying destroys microorganisms which might cause disease.
5. *Easily stored* because it does not require refrigeration and is in a dry concentrated form.
6. *Economical* since the initial cost is low and there need be no waste.

## GUIDES FOR USING NONFAT DRY MILK SOLIDS

### Methods and Proportions for Using Nonfat Dry Milk Solids

While nonfat dry milk solids may be added to the dry ingredients in normal or increased amounts in most recipes, there may be occasions when fluid milk is desired for use in such products as milk drinks and cheese. If so, one of the following methods may be used for reconstituting the dry milk solids.

### Methods for Reconstituting

1. Pour the measured amount of lukewarm water into a mixing bowl. Sift the nonfat dry milk solids over the water. Stir to mix. If necessary, beat with a rotary beater or wire whip to remove any lumps which may have formed. The milk will foam while beating, therefore avoid overbeating.
2. Pour the measured amount of lukewarm water into an electric mixer and sift or sprinkle the nonfat dry milk solids over the surface of the water. Set the mixer at low speed and mix until the product becomes smooth.
3. Place nonfat dry milk solids in a mixing bowl. Add enough of the lukewarm water to form a paste. When the paste is free from lumps, add the remainder of the water gradually and stir until the mixture becomes well blended.
4. Pour the lukewarm water into a jar which has a tight fitting lid. The jar should be approximately half full. Sift or sprinkle the nonfat dry milk solids on top of the water. Fasten the lid securely and shake until a smooth product is obtained.

### Proportions

To make a product comparable to fluid skim milk from nonfat dry milk solids use three to four level tablespoons or one fourth measuring cup of milk powder to one measuring cup of water. If nonfat dry milk solids is to be substituted for evaporated milk, use only one half cup of water instead of one cup. In recipes in which it is important to replace the fat of whole milk, two level teaspoons of fat should be used per fourth cup of milk powder. The amount of nonfat dry milk solids which may be used in a recipe is not limited to the equivalent of milk solids in fluid milk. When combined with the dry ingredients, the nonfat dry milk solids sometimes may be increased up to 4 times the equivalent of milk solids in fluid milk, as illustrated in the recipe section.

### Modifications in Recipes

Nonfat dry milk solids may be added to many recipes without changing the characteristics of the product. However, most baked products are improved by a change in one or more ingredients if large amounts of the milk solids are used. The changes indicated in these products are of three major types.

1. *Increased fat*—A high proportion of milk solids tends to make a product less tender. An increase of fat overcomes this tendency.
2. *Decreased flour or increased liquid*—Dryness in a batter or dough, due to absorption of moisture by added milk solids may result in an inferior product. To compensate for this bound liquid the flour may be decreased or the liquid increased.
3. *Reduced Sugar*—Nonfat dry milk solids is high in milk sugar. The addition of large quantities may make the product too sweet or may even change the texture of the product if the recipe already contains considerable sugar or other sweetening agents. Under these circumstances it may be necessary to reduce the sugar in the recipe.

Products using increased proportions of nonfat dry milk solids tend to brown quickly due to increased amounts of milk sugar. Hence the baking temperature of these products should be lowered to compensate for this tendency.

### Recommendations for Using Nonfat Dry Milk Solids

Ease in mixing and better products will result if these recommendations are followed.

1. Store nonfat dry milk solids in a tightly covered container to keep it from becoming hard and lumpy.
2. Sift nonfat dry milk solids before measuring since it has a tendency to pack.
3. Stir or sift until thoroughly mixed when combining the dry milk solids with the other dry ingredients.
4. Use lukewarm water if the milk is to be reconstituted.

## FACTORS CONSIDERED IN THE DEVELOPMENT OF RECIPES

While the homemaker is usually interested in providing good nutritious food for her family at low cost, the use of any new form of food presents problems until she has acquired some understanding of its properties and methods of its use.

To demonstrate the possibility of using nonfat dry milk solids for the enrichment of baked products, recipes for these products using from 2 to 4 times the equivalent of fresh milk have been developed in this laboratory. In these recipes the primary consideration has been the use of the maximum amount of nonfat dry milk solids which is consistent with a high quality product. In addition, other ingredients and methods of preparation have been adapted to the high milk solids content. A comparison of these recipes with the standard recipes will show what changes have been made both with ingredients and methods.

The following sections will help answer questions concerning ingredients, measurements and procedures used in this project. Recipes have not been tested with all possible types of ingredients, but they have been checked with those considered to be most uniformly available. Those ingredients which have been used in the experiments are listed with suggestions for the use of other kinds of ingredients. This list is followed by recommendations for measurements and procedures which have been found to give the best results.

### Ingredients

While *all purpose flour* was used in standardizing these recipes, soft wheat flour may be substituted in most cases without other change. However, in products in which the amount of liquid or fat is critical, these two ingredients may have to be reduced.

*Double acting baking powder* was used in all cases. If a quick acting baking powder is used, substitute 1 1-3 teaspoons for each teaspoon given in the recipe.

Whenever *fat* was called for, the recipe was tested with both *lard* and *hydrogenated fat*. Those recipes requiring a flavorful fat were tested with *margarine* or *butter*. *Oil* may be substituted for melted fat.

The recipes were tested with *fresh, medium sized eggs* which measured a scant  $\frac{1}{4}$  cup. Larger or smaller eggs may be used in all the recipes except the one for pressed cookies. In this recipe the consistency of the dough determines the shape of the cookie.

### Measurements

All measurements were level. Standard measuring cups and spoons were used.

### Procedure

Flour and nonfat dry milk solids were sifted before measuring, since they have a tendency to pack.

Dry ingredients mixed better when sifted together several times. However, when coarse materials as cornmeal or oatmeal were included, the same result was accomplished by stirring.

Fat was creamed when this procedure improved the texture. Otherwise it was softened or melted.

Nuts and raisins did not need to be floured to prevent them from sinking in the stiff batters of quick breads and cookies.

Pans and baking sheets were lightly greased in order to avoid affecting the product by the addition of extra fat. Biscuits and rich cookies were placed on ungreased baking sheets.

## RECIPES

### Quick Breads

Quick breads, piping hot and golden brown, are popular with most families. Many forms of quick bread may be served hot or cold in school lunches, for between meal or party refreshments and regular home meals. These breads lend themselves especially well to enrichment by the addition of nonfat dry milk solids.

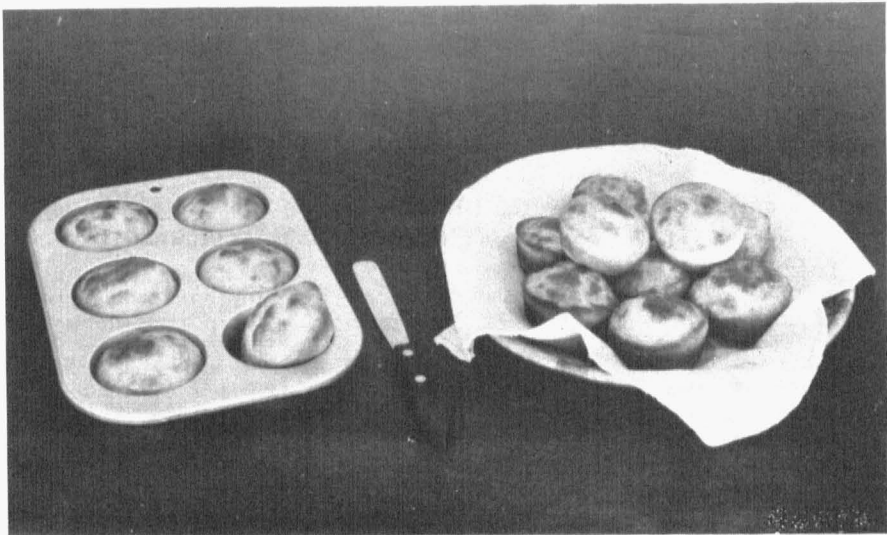


Fig. 2.—Muffins, like other quick breads made with high nonfat dry milk solids, have a crisp golden brown crust.

Muffin type quick breads may be baked in either muffin or loaf form. When baked in loaves, they rise more evenly when allowed to stand about 20 minutes before baking.

## GRIDDLE CAKES

1 cup sifted flour  
 1½ teaspoons baking powder  
 ½ teaspoon salt  
 1 tablespoon sugar (optional)

½ cup sifted nonfat dry milk solids  
 1 beaten egg  
 ¾ cup water or fluid milk  
 2 tablespoons melted fat

Stir or sift together flour, baking powder, salt, sugar and nonfat dry milk solids until thoroughly mixed.

Combine egg and water or fluid milk. Add melted fat. Pour into dry ingredients. Stir just enough to moisten dry ingredients. The batter will be slightly lumpy.

Drop batter from large spoon or ladle onto a hot greased griddle or skillet. Cook slowly until the top surface is covered with bubbles. Turn and brown on other side.

Yield: Five 6 inch griddle cakes.

## WAFFLES

2 cups sifted flour  
 2 teaspoons baking powder  
 ½ teaspoon salt  
 ¼ cup sugar  
 ¾ cup sifted nonfat dry milk solids

2 eggs, separated  
 1½ cups water or fluid milk  
 ¼ cup melted fat or oil  
 1 tablespoon sugar

Stir or sift together flour, baking powder, salt, ¼ cup sugar and nonfat dry milk solids until thoroughly mixed.

Beat egg yolks. Add water or fluid milk, then melted fat or oil and stir.

Add liquid to dry ingredients, stirring just enough to moisten dry ingredients. The mixture will have a rough or lumpy appearance.

Beat egg whites until frothy. Add 1 tablespoon of sugar and continue beating until stiff but not dry. Fold into batter.

Bake in a moderately hot waffle iron (As the amount of nonfat dry milk solids is increased, a slightly cooler iron gives better results for browning.)

Yield: Five 7 inch waffles.

## MUFFINS

2 cups sifted flour  
 5 teaspoons baking powder  
 1 teaspoon salt  
 2 tablespoons sugar

1 cup sifted nonfat dry milk solids  
 1 slightly beaten egg  
 1 cup plus 2 tablespoons water  
 ½ cup oil or melted fat

Stir or sift together flour, baking powder, salt, sugar and nonfat dry milk solids until thoroughly mixed.

Combine egg and water. Stir in oil or melted fat.

Pour liquid into dry ingredients. Stir approximately 12 stirs or until all dry ingredients are moistened. The batter should be slightly lumpy.

Fill greased muffin pans half full.

Bake in hot oven, 400°F., for 20 to 25 minutes or until medium brown.

Yield: Twelve to sixteen 2½ inch muffins.



## CORNBREAD

2 tablespoons sifted flour	$\frac{1}{8}$ cup sifted nonfat dry milk solids
1 cup cornmeal	1 slightly beaten egg
$\frac{1}{2}$ teaspoon salt	$\frac{1}{2}$ cup water or fluid milk*
1 tablespoon sugar	$\frac{1}{8}$ cup melted fat
$\frac{1}{2}$ teaspoons baking powder	

Stir together flour, cornmeal, salt, sugar, baking powder and nonfat dry milk solids until thoroughly mixed.

Combine egg and liquid. Add fat and stir.

Add dry ingredients to egg-fat mixture and beat well.

Pour into well greased shallow pan.

Bake in hot oven, 400°F., for 20 to 24 minutes, or until the product shrinks slightly from the sides of the pan.

Yield: Six 3 inch squares or eight to ten 2 $\frac{1}{2}$  inch muffins.

\*When sour milk is substituted for water or fluid milk in the above recipe use: 1 teaspoon baking powder plus  $\frac{1}{8}$  teaspoon soda instead of 1 $\frac{1}{2}$  teaspoons baking powder.

## BISCUITS

2 cups sifted flour	$\frac{1}{2}$ cup sifted nonfat dry milk solids
4 teaspoons baking powder	$\frac{1}{2}$ cup fat
$\frac{1}{2}$ teaspoon salt	$\frac{3}{4}$ cup cold water

Stir or sift together flour, baking powder, salt and nonfat dry milk solids until thoroughly mixed.

Cut fat into dry ingredients.

Add liquid and mix lightly. Dough should be as soft as can be handled.

Knead dough 10-15 strokes on lightly floured pastry cloth or bread board.

Roll  $\frac{1}{2}$  inch thick, cut with 2 inch cutter and place on ungreased baking sheet.

Bake in hot oven, 400° to 425°F., for 10 to 12 minutes.

Yield: Twenty-four 2 inch biscuits.

## BANANA BREAD

1 $\frac{1}{2}$ cups sifted flour	$\frac{3}{4}$ cup sugar
1 teaspoon soda	1 slightly beaten egg
1 teaspoon salt	1 cup banana pulp (2 mashed medium bananas)
1 cup sifted nonfat dry milk solids	1 tablespoon water
$\frac{1}{4}$ cup fat	$\frac{1}{2}$ cup chopped nuts

Stir or sift together flour, soda, salt and nonfat dry milk solids until thoroughly mixed.

Soften fat. Add sugar and egg. Beat until well blended.

Mix banana pulp and water with the fat-sugar-egg mixture.

Add dry ingredients to above mixture and blend well.

Stir in chopped nuts.

Pour into lightly greased loaf pan. Let stand 20 minutes before baking.

Bake in moderate oven, 350°F., for 40 to 50 minutes or until the bread will spring back when touched lightly at the center.

Yield: One loaf, approximately 9x5x2 $\frac{1}{2}$  inches.

## GINGERBREAD

2 $\frac{1}{2}$ cups sifted flour	$\frac{2}{3}$ cup sifted nonfat dry milk solids
3 teaspoons baking powder	$\frac{2}{3}$ cup fat
$\frac{1}{2}$ teaspoon soda	$\frac{1}{4}$ cup sugar
1 teaspoon cinnamon	1 well beaten egg
1 teaspoon ginger	1 cup molasses or sorghum
$\frac{1}{4}$ teaspoon allspice	1 cup boiling water
1 teaspoon salt	

Stir or sift together flour, baking powder, soda, spices, salt and nonfat dry milk solids until thoroughly mixed.

Soften fat and pour into large mixing bowl. Add sugar and blend well.

Stir in egg. Add molasses and beat until well mixed.

Add dry ingredients and stir until well blended.

Add boiling water and beat until the mixture is smooth. Pour into greased shallow baking pan.

Bake in moderate oven, 350°F., for 40 to 50 minutes or until the bread will spring back when touched lightly at the center.

Yield: Twelve 2x4 inch servings.

## ORANGE BREAD

1 $\frac{1}{4}$ cups sifted flour	$\frac{1}{3}$ cup fat
$\frac{1}{4}$ cup sugar	2 tablespoons grated orange peel
$\frac{1}{2}$ teaspoon salt	1 beaten egg
2 $\frac{1}{2}$ teaspoons baking powder	2 tablespoons water
$\frac{1}{2}$ cup sifted nonfat dry milk solids	3 tablespoons orange juice

Stir or sift together flour, sugar, salt, baking powder and nonfat dry milk solids until thoroughly mixed.

Cut fat into dry ingredients with 2 knives or pastry blender. Stir in orange peel.

Add egg, water and orange juice. Stir until well blended.

Put in lightly greased loaf pan. Let stand 20 minutes before baking.

Bake in moderate oven, 350°F., for 35 to 40 minutes, or until the bread will spring back when touched lightly at the center.

Yield: One loaf 8x4x2 $\frac{1}{2}$  inches.

## QUICK NUT BREAD

2 cups sifted flour	$\frac{1}{2}$ cup fat
4 teaspoons baking powder	1 beaten egg
$\frac{1}{2}$ teaspoon salt	$\frac{3}{4}$ cup water or fluid milk
$\frac{1}{4}$ cup sugar	$\frac{1}{2}$ cup chopped nuts
$\frac{2}{3}$ cup sifted nonfat dry milk solids	

Stir or sift together flour, baking powder, salt, sugar and nonfat dry milk solids until thoroughly mixed.

Cut fat into dry ingredients with 2 knives or a pastry blender.

Combine egg and water. Beat slightly and add to dry ingredients. Stir until thoroughly mixed. Stir in nuts.

Put into greased loaf pan. Let stand 20 minutes before baking.

Bake in moderate oven, 350°F., for 40 to 45 minutes, or until the bread will spring back when touched lightly at the center.

Yield: One loaf, 9x5x2 $\frac{1}{2}$  inches.

## SPOON BREAD

1½ cups boiling water  
 1 cup corn meal  
 1 tablespoon sugar (optional)  
 ¾ teaspoon salt  
 ¾ cup sifted nonfat dry milk solids

2 tablespoons margarine or butter  
 1 cup cold water  
 2 eggs, separated  
 1½ teaspoons baking powder

Stir or sift together corn meal, sugar, salt and nonfat dry milk solids until thoroughly mixed. Add gradually to boiling water. Stir constantly to avoid lumping and sticking. Cook 3 minutes over medium heat, stirring constantly.

Stir in margarine or butter.

Beat together egg yolks and water. Add cooked corn meal mixture by spoonfuls. Beat after each addition until batter is free from lumps.

Mix in baking powder.

Beat egg whites until stiff but not dry. Fold into above mixture.

Pour into an 8 inch well greased casserole.

Bake in moderate oven, 325°F., for 1 hour or until firm in the center. Serve immediately.

Yield: Six to eight servings.

## Cookies

Often a mother is faced with the problem of deciding what to put in the lunch box and what to have on hand for after school demands. If she provides cookies enriched with nonfat dry milk solids, she is providing a sweet which is carrying its share of body building nutrients. Cookie recipes contain very little liquid and often no milk. Large amounts of nonfat dry milk solids may be added to the dry ingredients, however, without appreciable change in characteristics of the product. These enriched cookies are economical, easy to prepare and keep well. If they are not too sweet or rich, they will satisfy without dulling the appetite.

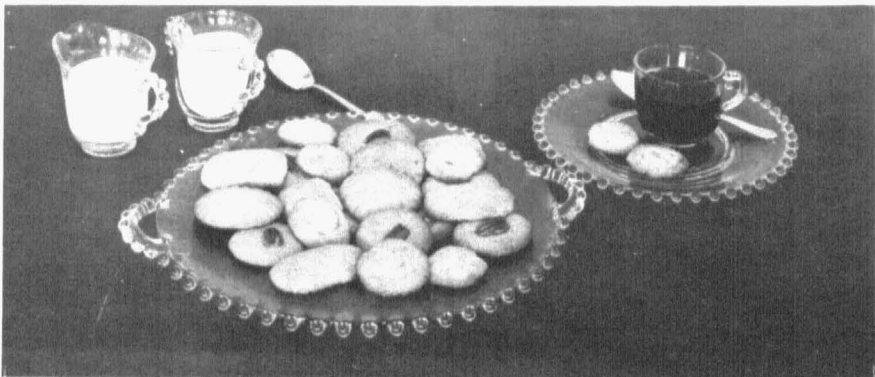


Fig. 3.—A variety of cookies may be made from the sugar cookie recipe.

Sometimes it is desirable to have cookies larger than those suggested in the recipe. Larger cookies will need to be baked longer and at a lower temperature than indicated in the directions.

#### BUTTERSCOTCH REFRIGERATOR COOKIES

2 cups sifted flour	1 beaten egg
3 teaspoons baking powder	$\frac{1}{4}$ cup water
$\frac{1}{2}$ teaspoon salt	1 teaspoon vanilla
$\frac{1}{2}$ cup sifted nonfat dry milk solids	$\frac{1}{2}$ cup chopped nuts
$\frac{2}{3}$ cup fat	$\frac{1}{2}$ cup chopped dates
$1\frac{1}{3}$ cups brown sugar (firmly packed)	

Stir or sift together flour, baking powder, salt and nonfat dry milk solids until thoroughly mixed.

Cream fat. Add sugar gradually and cream well after each addition. Add egg and vanilla, and beat well.

Add dry ingredients and water to creamed mixture and blend well.

Stir in nuts and dates.

Shape cookie dough into a 2 inch roll and wrap in waxed paper. Chill several hours or overnight.

Slice with sharp knife into slices  $\frac{1}{8}$  inch thick and place 1 inch apart on lightly greased baking sheet.

Bake in moderate oven, 325° to 350°F., for 12 to 15 minutes.

Yield: Seventy-two 2 inch cookies.

#### CHOCOLATE BARS

1 cup sifted flour	1 beaten egg
$\frac{1}{4}$ teaspoon soda	1 square melted chocolate
$\frac{1}{2}$ teaspoon salt	1 teaspoon vanilla
$\frac{1}{2}$ cup sifted nonfat dry milk solids	$\frac{1}{4}$ cup water
$\frac{2}{3}$ cup fat	$\frac{1}{2}$ cup chopped nuts
$\frac{2}{3}$ cup brown sugar (firmly packed)	

Stir or sift together flour, soda, salt and nonfat dry milk solids until thoroughly mixed.

Cream fat and sugar.

Add egg, melted chocolate and vanilla, and mix thoroughly.

Add water, dry ingredients and nuts. Stir until well blended.

Pour into well greased pan 9x9 inches.

Bake in moderate oven, 375°F., for 15 to 18 minutes.

Cut into bars while still warm.

Yield: Eighteen  $1\frac{1}{2}$ x3 inch bars

#### FAMILY FAVORITES

1 cup sifted flour	$\frac{1}{2}$ cup coconut
$\frac{1}{4}$ teaspoon soda	$\frac{1}{2}$ cup fat
$\frac{1}{2}$ teaspoon baking powder	$\frac{1}{2}$ cup sugar
$\frac{1}{2}$ teaspoon salt	$\frac{1}{2}$ cup brown sugar
$\frac{1}{2}$ cup sifted nonfat dry milk solids	1 beaten egg
1 cup quick oats	$\frac{1}{2}$ teaspoon vanilla
1 cup rice crispies or flake cereal	$\frac{1}{4}$ cup water

Sift together flour, soda, baking powder, salt, and nonfat dry milk solids until thoroughly mixed. Stir in oats, rice crispies and coconut.

Cream fat. Add sugar gradually in 4 portions. Cream well after each addition.

Add egg and vanilla and mix well.

Add dry ingredients and water to the fat-sugar-egg mixture. Blend well.

Drop by teaspoonfuls onto greased baking sheet, spacing cookies 2 inches apart.

Bake in moderate oven, 350°F., for 10 to 12 minutes.

Yield: Sixty 1¼ inch cookies.

#### FRUIT FILLED COOKIES

2½ cups sifted flour

½ teaspoon soda

1 teaspoon salt

½ cup sifted nonfat dry milk solids

¾ cup fat

1 cup brown sugar

(firmly packed)

½ cup water

Sift together flour, soda, salt and nonfat dry milk solids until thoroughly mixed.

Cream fat. Add sugar and stir until well blended.

Add dry ingredients and water and mix well. Chill.

Roll one half of the dough between waxed papers to about ⅛ inch thick. Place on well greased cookie sheet. Spread evenly with fruit mixture.

Roll remainder of dough to the same size and thickness. Place on top of fruit mixture. Press edges together slightly.

Bake in moderate oven, 350°F., for 15 to 20 minutes or until golden brown color. Cut while warm into desired shape.

Yield: Seventy 1½ inch cookies.

#### FRUIT FILLING

1 cup crushed pineapple or cooked  
prunes, apricots or dates.

¼ cup sugar

1½ tablespoons flour

Pour fruit into sauce pan. Combine sugar and flour. Mix thoroughly and add to fruit. Cook until the mixture thickens. Stir to prevent sticking.

#### VARIATION

*Pinwheel Cookies.* Roll dough approximately ⅛ inch thick, spread with fruit mixture and roll into a small roll. Chill. Slice ⅛ to ¼ inch thick. Place on well greased cookie sheet about 1 inch apart. Bake in moderate oven, 350°F., for 15 to 20 minutes or until golden brown.

#### MACAROONS

1 cup macaroon milk-base  
1½ cups cornflakes

1 cup coconut

1 teaspoon vanilla

Mix ingredients well and drop by tablespoonfuls onto a greased cookie sheet. Bake in moderate oven, 325°F., for 12 to 15 minutes. Remove cookies immediately from cookie sheet. A well greased and fairly wide spatula is best for removing cookies.

Yield: Forty cookies.

## MACARON MILK-BASE\*

$\frac{3}{4}$ cup sugar	$\frac{1}{8}$ teaspoon salt
$\frac{1}{2}$ cup sifted nonfat dry milk solids	1 tablespoon margarine or butter
$\frac{1}{4}$ cup water	

Combine all ingredients in top of double boiler. Place over hot water. Stir constantly until well mixed and then beat with a rotary beater for 3 to 5 minutes or until the sugar has dissolved. Remove from heat and cool.

Yield: One cup of mixture.

\*Macaroon milk-base may be used as a substitute for condensed milk in macaroon recipes. It may be kept in refrigerator for 2 or 3 days.

## MOLASSES COOKIES

2 cups flour	$\frac{1}{2}$ cup nonfat dry milk solids
$\frac{1}{4}$ teaspoon soda	$\frac{2}{3}$ cup fat
$1\frac{1}{2}$ teaspoons baking powder	$\frac{1}{4}$ cup sugar
$\frac{1}{2}$ teaspoon salt	1 egg
$\frac{1}{2}$ teaspoon ginger	$\frac{1}{4}$ cup water
$\frac{1}{2}$ teaspoon cinnamon	$\frac{3}{4}$ cup molasses or sorghum

Stir or sift together flour, soda, baking powder, salt, spices and nonfat dry milk solids until thoroughly mixed.

Cream fat. Blend in sugar gradually. Add egg and beat well.

Combine water and molasses. Add alternately with the dry ingredients to the creamed mixture. Stir after each addition until well blended.

Drop by teaspoonfuls onto a lightly greased cookie sheet.

Bake in moderate oven, 325° to 350°F., for 14 to 18 minutes.

Yield: Forty-eight 2 inch cookies.

## OATMEAL COOKIES

1 cup quick oats	$\frac{1}{2}$ cup fat
1 cup sifted flour	$\frac{1}{2}$ cup sugar
$\frac{1}{4}$ teaspoon soda	1 beaten egg
$\frac{1}{2}$ teaspoon salt	$\frac{1}{2}$ teaspoon vanilla
$\frac{1}{2}$ teaspoon cinnamon	$\frac{1}{3}$ cup water
$\frac{1}{8}$ teaspoon nutmeg	$\frac{1}{2}$ cup raisins
$\frac{1}{2}$ cup sifted nonfat dry milk solids	

Stir together oats, flour, soda, salt, spices and nonfat dry milk solids until thoroughly mixed.

Cream fat and sugar. Add egg and vanilla. Beat well.

Add dry ingredients, water and raisins to fat-sugar-egg mixture. Beat well.

Drop by teaspoonfuls on lightly greased baking sheet, spacing cookies 2 inches apart.

Bake in moderate oven, 350° to 375°F., for 10 to 12 minutes or until golden brown.

Yield: Forty-eight 2 $\frac{1}{2}$  inch cookies.

## PEANUT BUTTER COOKIES

1½ cups sifted flour	½ cup granulated sugar
1 teaspoon soda	½ cup brown sugar (firmly packed)
½ teaspoon salt	1 beaten egg
¾ cup sifted nonfat dry milk solids	½ teaspoon vanilla
½ cup fat	2 tablespoons water
½ cup peanut butter	

Stir or sift together flour, soda, salt and nonfat dry milk solids. Mix thoroughly. Mix fat and peanut butter. Add sugars and cream well.

Add egg and vanilla to fat-sugar mixture and beat well.

Add dry ingredients and water. Stir until well blended.

Roll into 1 inch balls and place 2 inches apart on ungreased cookie sheet. Press flat with floured fork.

Bake in moderate oven, 325°F., for 10 to 12 minutes or until golden brown.

Yield: Forty 2 inch cookies.

## PRESS COOKIES

2½ cups sifted flour	1¼ cups granulated or powdered sugar
½ cup sifted nonfat dry milk solids	1 well beaten egg (large)*
1 cup butter or margarine	1 teaspoon vanilla

Sift or stir together flour and nonfat dry milk solids until thoroughly mixed. Cream butter or margarine. Add sugar and beat until fluffy. Add egg and vanilla. Mix thoroughly. Fold in flour.

Chill slightly if dough is not stiff enough to hold shape.

Press dough through cookie press onto baking sheet, placing cookies about 1 inch apart.

Bake in moderate oven, 350° to 375°F., for 7 to 10 minutes or until light brown.

Yield: Eighty-four small cookies.

\*A large egg will measure approximately ¼ cup. If the egg used is smaller, add water to bring the volume to ¼ cup.

## ROCKS.

2 cups sifted flour	¾ cup fat
½ teaspoon allspice	1 cup sugar
1 teaspoon cinnamon	2 beaten eggs
¼ teaspoon nutmeg	¼ cup water
½ teaspoon soda	½ cup chopped nuts
½ teaspoon salt	½ cup seedless raisins
½ cup sifted nonfat dry milk solids	

Stir or sift together flour, spices, soda, salt and nonfat dry milk solids until thoroughly mixed.

Cream fat. Add sugar gradually and cream well after each addition. Add egg and beat well.

Add dry ingredients and water alternately to the creamed mixture in two additions. Blend well after each addition. Stir in nuts and raisins.

Drop by teaspoonfuls 2 inches apart on lightly greased cookie sheet.

Bake in moderate oven, 325° to 350°F., for 15 to 20 minutes.

Yield: Seventy-two 2 inch cookies.

## SUGAR COOKIES

2 cups sifted flour	1 cup sugar
2 teaspoons baking powder	1 well beaten egg
$\frac{1}{2}$ teaspoon salt	1 teaspoon vanilla
$\frac{1}{2}$ cup sifted nonfat dry milk solids	$\frac{1}{4}$ cup water
$\frac{1}{8}$ cup fat	

Stir or sift together flour, baking powder, salt and nonfat dry milk solids until thoroughly mixed.

Cream fat and sugar. Add egg and vanilla. Blend well.

Add dry ingredients and water to fat-sugar-egg mixture. Stir until well mixed. Roll into balls approximately one inch in diameter. Place on lightly greased baking sheet and press to about  $\frac{1}{4}$  inch thickness.

Bake in moderate oven, 350°F., for 10 to 12 minutes or until golden brown.

Yield: Fifty 2 inch cookies.

## VARIATIONS

*Date cookies* - Add 1 cup of chopped dates.

*Raisin cookies* - Add 1 cup of chopped raisins.

*Nut cookies* - Add 1 cup of chopped nuts.

*Coconut cookies* - Add 1 cup of grated coconut.

*Orange cookies* - Substitute 2 tablespoons each of orange juice and lemon juice for the water. Add 2 tablespoons of grated orange rind.

*Candied fruit cookies* - To the recipe for orange cookies, add 1 cup chopped candied fruit.

## VANILLA COOKIES

2 cups sifted flour	1 cup sugar
2 teaspoons baking powder	1 beaten egg
$\frac{1}{2}$ teaspoon salt	1 teaspoon vanilla
$\frac{1}{2}$ cup sifted nonfat dry milk solids	2 tablespoons water
$\frac{1}{2}$ cup fat	

Stir or sift together flour, baking powder, salt and nonfat dry milk solids until thoroughly mixed.

Cream fat. Add sugar gradually and cream well after each addition. Add egg and vanilla and blend well.

Add water and dry ingredients alternately in two additions. Beat after each addition until well blended. After last addition knead slightly with hands.

Place dough on lightly greased cookie sheets and roll approximately  $\frac{1}{4}$  inch thick. Cut with 2 inch cookie cutter, leaving 1 inch space between cookies.

Remove extra dough from around cookies, thus leaving the cookies in place. Bake in moderate oven, 375°F., for 12 to 15 minutes or until golden brown.

Reroll, cut and bake the extra dough. Yield: Forty 2 $\frac{1}{2}$ -inch cookies.

## VARIATIONS

*Lemon cookies* - Omit vanilla. Substitute two tablespoons of lemon juice for the water. Add 1 teaspoon of grated lemon rind.

*Orange cookies* - Omit vanilla. Substitute two tablespoons of orange juice for the water. Add two tablespoons grated orange rind.