



Powdered Milk

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Recipes from Terry Clark, special to Mormonchic.com

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Powdered milk has long been a staple of a good food storage plan. I can remember my mom buying, storing, using and rotating it when I was a little girl, which is a good while ago! Powdered milk has been around since well before my childhood though. Marco Polo reported in the 13th century, that nomadic Tartars would boil mares' milk and then dry it into a powder in the sun. To use it they would add water before their days' horse travel. The agitation of the ride would reconstitute the milk and thicken into a porridge used for supper at the end of the journey. We have a bit more convenience and variety in uses for powdered milk today.

Mormonchic.com reader Jen Lords, attended her Stake Relief Society's Provident Living Fair a few years ago and sat in on a mini-class where the teacher, Terry Clark, demonstrated the many uses of powdered milk. She was so excited about the information she shared, she sent the recipes on to us to share with all of you.

We hope you find the information we've researched on powdered milk, as well as Terry's recipes will be of benefit as you continue to build, maintain and rotate your own food storage supply.

All these recipes are for non-instant powdered milk. With instant powdered milk the amounts will vary, so check the package for rules on reconstituting.

Amount of Milk	Water	Powder
1/4 cup	1/4 cup	2 teaspoons
1/2 cup	1/2 cup	4 teaspoons
1 cup	7/8 cup	3 tablespoons
2 cups	2 cups	1/3 cup
3 cups	3 cups	1/2 cup
1 quart (4 cups)	3-1/2 cups	2/3 cup
2 quarts	8 cups	1-1/3 cups
1 gallon	3-3/4 quarts	2-2/3 cups

Fun Facts

- It is usually created by forcing pasteurized and concentrated milk through a nozzle with many tiny holes and spraying it in a hot chamber made of stainless steel, where the water evaporates and the particles fall off as powdered milk.
- Although full fat and reduced fat versions are available, most powdered

BASIC POWDERED MILK YOGURT

Keeps in fridge 2 weeks

2 cups warm (100degree) water
1 cup non-instant milk powder
2 tablespoons unflavored yogurt

Pour warm water into blender and turn on at low speed. Add milk powder slowly. Blend until smooth. Add yogurt and blend a few more seconds. Pour into jars or glasses. Set with one of the following methods:

Method 1 - Place jars neck-deep in warm water. Cover pan with lid. Set on Yogurt maker and keep temperature at 100-120 degrees. Will take 4-8 hours to set up. Chill immediately.

Method 2 - Turn on a heating pad to the medium setting. Place a folded towel over the heating pad. Set jars on towel. Cover with another towel. Let set 4-8 hours. When set, chill immediately. You can set your yogurt overnight or while you are at work. Save some of your homemade yogurt for starter.

YOGURT CREAM CHEESE OR SOUR CREAM

2 cups homemade yogurt (see recipe above)
2 paper towels
colander
large bowl

Place a paper towel in the bottom of a colander. Put homemade yogurt on the paper towel. Cover with another paper towel. Set colander inside a larger bowl to catch liquid. Place the whole thing in the refrigerator over night. The result is cream cheese. (*fat free!)

For sour cream, drain for less time.

BASIC COTTAGE CHEESE

1 gallon milk made from powdered milk.
1 rennet tablet or 1/4 junket tablet (found by the jello and canning supplies at the store)
1 pint buttermilk or basic yogurt.

milk is sold as nonfat dry milk.

- In the U.S., Japan and Western Europe it is used mainly as a baking or storage item. It is used extensively in Singapore and Malaysia as their main form of milk.

Powdered Milk & Home Storage Q & A

The following questions and answers are from the church's provident living website.

What kind of milk is best to store?

Nonfat milk, either regular or instant, stores well when packaged properly and kept at room temperature or cooler. In the past, many felt that non instant milk would store better. There is little difference in shelf life between instant and non instant powdered milk.

What are the best containers?

Milk stored in airtight, low oxygen packaging has been found to last longer and retain a fresher taste than milk stored in boxes or plastic bags.

How long can powdered milk be stored?

Optimal storage life on nonfat dry milk stored at room temperature is three years before the milk begins to taste stale. However, when stored at cooler temperatures, it can be kept much longer. [With this in mind you should either freeze your powdered milk, or buy it in the fall and rotate it yearly.] You can rotate powdered milk by using it yourself or by giving it to others who will use it.

Dissolve rennet tablet in warm water. Pour milk into a LARGE heavy pot and heat to 90°F. Add buttermilk or yogurt. Stir to mix. Add dissolved rennet. Cover pot and leave overnight in a warm place.

The next day, you will find a gelatinous, almost solid mass-like firm yogurt in the pot. This is the curd. with a silver knife, cut through this curd to break it into small pieces. Gently pour into a bowl. Now set the bowl into a pan of warm water and bring curd up to 110°F. Shake the bowl gently while it is being heated to help distribute the heat more evenly.

At 110°F, turn off the heat but leave the cheese bowl in the water for about 1/2 an hour. Then pour cheese into a cloth bag or several layers of cheese cloth and hang it up to drain. When drained, you can mash with a fork, if desired. Moisten as needed. Season as desired.

SOFT COTTAGE CHEESE

2 cups boiling water
1-1/2 cups dry milk powder
2000 mg ascorbic acid powder OR
3 tablespoons fresh lemon juice or white vinegar

Pour water into blender. Slowly add milk powder. Pour into saucepan (foam and all). Sprinkle curdling agent slowly around edges and gently stir over medium heat just until milk begins to curdle, separating into curds and whey. Remove from heat and let rest 1 minute. Pour into a cheese cloth lined colander. rinse with hot then cold water. Drain until no whey drip, about 1 minute.

Makes about 1-1/2 cups curds.

Refrigerate if not used immediately.

RC NOTE: (assuming 1/4 tsp ascorbic acid = 1000 mg ascorbic acid.)

QUICK SOFT PRESSED CHEESE

2 cups boiling water
1-1/2 cup dry milk powder
1/3 cup olive or vegetable oil
4000 mg ascorbic acid powder

Put in blender: water milk powder, oil. Allow foam to settle slightly.

How much powdered milk should be stored?

Guidelines for quantities of dry milk to store are found in the 1978 booklet published by The Church of Jesus Christ of Latter day Saints called *Essentials of Home Production and Storage*. The booklet recommends that members store an equivalent of 300 quarts (about 75 pounds) of dry milk per person per year.

However, since that time, a U.S. government study on nutritional adequacy during periods of food shortage has recommended 64 quarts, or 16 pounds, per family member per year. Equivalent to approximately one glass of milk a day, that amount will maintain minimum health standards. Keep in mind, however, that children and pregnant or nursing mothers will require more than the minimum amount of stored milk. Families who opt to store only the minimum 16 pounds of milk per person should also increase storage of grains from the recommended 300 pounds per person to 400 pounds per person to compensate nutritionally for the smaller amount of milk.

What should I do with milk that is past its prime shelf life?

Milk develops off flavors as it ages. However, it still retains some nutritional value, and unless spoilage has occurred from moisture, insects, rodents, or contamination, it is still safe to use.

What can be done with milk that is too old to drink?

It is important to rotate dry milk. Older dry milk may no longer be suitable for drinking, but it can be used in cooking as long as it has not spoiled. If powdered milk has spoiled, it can be used as fertilizer in the garden

Pour into saucepan and heat until at least 160 °F. Add ascorbic acid and continue to stir until mixture curdles. Rinse with warm water then salt. Place between two plates with a weight on top to press out liquid.

Press for 30 minutes or so. Wrap in plastic and refrigerate. For smoky cheese: after rinsing, add 1 tsp liquid smoke flavoring and 1/2 tsp salt.

Shelf Life

Stored at:
40 °F or below: 2 years
70 °F or below: 1 year
90 °F or below: 3 months.

With this in mind you should either freeze your powdered milk, or buy it in the fall and rotate it yearly.

QUESO BLANCO - the original Jack Cheese

2 cups warm water
1-1/2 cup dry milk powder
1/3 cup white vinegar

Blend all ingredients. Pour into saucepan. Cook over medium heat, stirring until curds form and remaining liquid is a clear yellow. If still milky looking, add vinegar, 1 tsp at a time. Pour curds into a cheese cloth lined colander. Rinse well with very warm water to remove vinegar flavor. Add salt to taste and press if desired between 2 plates. Wrap in plastic and store in fridge.

SWEETENED CONDENSED MILK

Place 1/2 cup hot water in blender.
Turn on and slowly add 3/4 cup sugar and 3/4 cup powdered milk.
Blend until smooth.

Makes 1 can.

RC NOTE: For recipes where the sweetened condensed milk is replacing shortening, add 4 tablespoons butter or margarine to the hot water.

COOL WHIP

Chill a small mixing bowl.
Soften 1 tsp gelatin in cold water.
Then add 3 TBS boiling water, stirring until gelatin is completely dissolved.

Place 1/2 cup ice water and
1/2 cup dry milk powder in chilled bowl.
Beat on high until stiff peaks form.
Add 3 tablespoons sugar, still beating.
Then add 3 tablespoons oil and the gelatin.
Place in freezer 15 minutes. Then transfer to fridge until ready to
use. Stir before using to retain creamy texture.

Makes 2 cups.

HOMEMADE RANCH DRESSING

Blend together:
2 cups mayo
2 cups homemade yogurt
1/2 teaspoon garlic powder
1/2 teaspoon pepper
1-1/2 teaspoon onion powder
1-1/2 teaspoon salt
2 teaspoon parsley flakes

YOGURT JELLO

When mixing jello, leave out 1/4 cup water. Add 1 cup homemade
yogurt to partially set jello. (using store bought jello will give a much
tarter flavor!) Fruit may be added.

HEALTH DIP

Thoroughly blend:
2 cups unflavored homemade yogurt
2 cups homemade cottage cheese.

Sprinkle in:
1/4 cup toasted sesame seeds
1/4 cup wheat germ
1/2 teaspoon celery salt
1/4 teaspoon garlic powder.

Blend well, salt to taste.

Chill and serve with crackers or veggies. VERY GOOD!!!

FUDGESICLES

Mix together:
3/4 cup sugar
1 tablespoon cornstarch
3 tablespoons cocoa
3 tablespoons flour
1/4 teaspoon salt
1-1/4 cup non instant dry milk powder

Beat into 4 cups boiling water and cook 1 minute.

Add 1/2 teaspoon vanilla and pour into mold and freeze.

PINK LEMONADE PIE

Mix together:
6 oz can of pink lemonade concentrate,
8 oz cool whip
1 can sweetened condensed milk

Pour into graham cracker crust. Chill until ready to serve.

CHEESE CAKE

Combine:
12 oz cream cheese (1-1/2 cups homemade cream cheese)
3/4 cup sugar
3 cups cool whip

Spread into graham cracker crust in a 9x13 pan. Spread with 2 cans cherry pie filling. Chill.