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Skim milk powder



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Skim milk powder

Food Advisory Division Agriculture Canada

INTRODUCTION

Instant skim milk powder is a convenient dairy food that blends easily and instantly in all types of food preparation using milk. Retail stores sell it under various brand names and in several package sizes — 100 g, 500 g, 1.5 kg, 2.5 kg, 5 kg, and 10 kg.

Skim milk powder has many advantages. Check these outstanding points:

• Inexpensive — costs less than fresh skim milk. A 500 g package makes 5 L of skim milk.

• Convenient — ready and quick when used at home, easy and compact to carry on picnics and camping trips.

• Easy to use — easy to measure, dissolves instantly.

• Easy to store — saves space and the powder needs no refrigeration.

• Nutritious — an excellent source of protein, riboflavin, calcium and phosphorus, and a good source of thiamine.

• Compare the calories — 250 mL reconstituted skim milk contain 90 kilocalories (380 kJ), 250 mL whole milk have 157 kilocalories (660 kJ).

• Tastes good — flavor is the same as fresh skim milk.

• Many uses — in cooking, baking, whipped desserts and beverages.

In your diet

Instant skim milk powder makes it possible to get more milk into your meals in an economical and convenient way. It may also be added to various foods not usually made with milk to increase the food value. Milk and milk products are important in your diet. Canada's Food Guide recommends two to three servings of milk and milk products for children up to 11 years, three to four servings for adolescents, two servings for adults and three to four servings for pregnant and nursing women. One serving = 250 mL milk.

How it is made

Skim milk powder is made from fresh pasteurized milk from which the butterfat is removed. After being partly concentrated in a vacuum process, the skim milk is sprayed as a fine mist under pressure into a heated chamber where it dries almost instantly. The resulting powder is moistened and then redried in a special instantizing process, during which it forms larger many-sided granules that dissolve instantly in cold water.

Grades

All skim milk powder packaged and sold in Canada is marked Canada First Grade. The powder is graded on the basis of color, flavor, odor, fat and moisture content, solubility and sediment and is checked for bacterial content according to regulations established by Agriculture Canada.

How to store it

Unopened packages of skim milk powder keep for many months on the kitchen shelf. After opening a package, use the powder within 1 to 2 months. Close the package tightly after each use because the powder tends to absorb moisture. Once the powder is mixed with water, treat it like fresh milk. The reliquefied product can be used immediately or refrigerated.

How to use it

Skim milk powder may be used in the dry form for cooking or baking, or reliquefied and used in place of fluid milk.

TO USE DRY Mix the skim milk powder with the other dry ingredients and add the required amount of water.

TO RELIQUEFY Follow the package directions for the proportions of powder and water to mix for best results. The usual amount recommended to make 1 L milk is 325 mL powder added to 950 L water.

TO MAKE MODIFIED SKIM MILK Add 25 mL extra skim milk powder to each 250 mL reconstituted skim milk. This gives more body to the skim milk.

TO MAKE PARTLY SKIMMED MILK Follow the package directions for reconstituting the skim milk powder. Mix equal quantities of reconstituted skim milk and whole milk to obtain approximately 2% milk.

Soups and sauces

Cream soups and chowders are nourishing favorites for lunch or supper. A variety of sauces to accompany vegetables, meat and poultry dishes also can be made with skim milk powder.

Cream of carrot soup

1 L sliced carrot
250 mL chicken bouillon
175 mL finely
chopped onion
100 mL butter

100 mL butter 100 mL flour 5 mL salt 2 mL white pepper 1 mL dry mustard 500 to 625 mL skim milk powder 1.5 L cold water

Cook carrot in chicken bouillon until tender (about 10 min). Press carrot through sieve with cooking liquid or purée in blender. Sauté onion in butter until transparent. Blend in flour, seasonings and skim milk powder. Gradually add cold water. Stir and cook until smooth and thick. Add carrots and heat through. Makes about 2.5 L.

CREAM OF CELERY SOUP Make as cream of carrot soup but use 1 L finely diced celery in place of carrots. Purée in blender after cooking. Continue as above.

CREAM OF PEA SOUP Make as cream of carrot soup but use two 540 mL cans green peas, undrained, in place of carrots. Omit chicken bouillon. Heat peas for 5 min, press through sieve or purée in blender. Continue as above.

Cream of onion soup

1 L sliced onion1 mL pepper50 mL butter2 mL sugar125 mL boiling water250 mL skim milk powder50 mL flour750 mL cold water10 mL salt15 mL chopped fresh parsley

Sauté onion in butter until transparent. Add boiling water; cover and simmer until onion is tender (about 15 min). Combine flour, seasonings, sugar and skim milk powder. Gradually blend in cold water. Add to onion. Stir and cook until smooth and thick. Add parsley. Makes about 1.2 L.

Corn chowder

5 slices bacon, cut in
1 mL pepper
1.5 cm pieces
15 mL flour
125 mL chopped onion
375 mL skim milk powder
375 mL diced potato
500 mL cold water
1 can (540 mL)
5 mL salt
cream style corn

Panfry bacon until crisp, remove from pan and drain. Sauté onion in bacon fat until transparent. Drain off fat. Add potato, boiling water and seasonings. Cover and simmer until potato is almost tender (about 10 min). Combine flour and skim milk powder. Gradually blend in cold water. Add to vegetables. Stir and cook until smooth and thick. Add corn and heat. Sprinkle with bacon before serving. Makes about 1.5 L.

Vegetable chowder

375 mL chopped onion	10 mL salt
125 mL diced celery	1 mL pepper
125 mL diced green pepper	Dash thyme
250 mL diced carrots	50 mL chopped fresh parsley
50 mL fat	1 can (199 mL) kernel corn
15 mL flour	250 mL shredded cabbage
500 mL diced potato	175 mL skim milk powder
500 mL chicken bouillon	500 mL cold water

Sauté onion, celery, green pepper and carrots in fat until onion is transparent. Stir in flour, potato, bouillon and seasonings. Cover and simmer until vegetables are tender (15 to 20 min). Add corn and cabbage; simmer 5 min more. Combine skim milk powder and water. Add to soup and heat through. Makes about 2 L.

Cream sauce

		Thin	Medium	Thick
Fat	(mL)	25	50	75
Flour	(mL)	25	50	100
Salt	(mL)	2	2	2
White pepper		Dash	Dash	Dash
Skim milk powder	(mL)	125 to 200	125 to 200	125 to 200
Water	(mL)	350	350	350

Melt fat. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Makes about 450 mL.

Cheese sauce

50 mL fat	Dash cayenne
50 mL flour	125 to 200 mL skim milk powder
2 mL salt	350 mL water
Dash white pepper	250 mL (100 g) grated cheddar
2 mL dry mustard	cheese

Melt fat. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Add cheese and stir until melted. Serve with vegetables, if desired. Makes about 500 mL.

Tomato cream sauce

50 mL fat	3 mL chili powder
50 mL flour	125 to 200 mL skim milk powder
2 mL salt	400 mL water
Dash white pepper	125 mL chili sauce

Melt fat. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Add chili sauce and heat through. Serve with meat loaf, if desired. Makes about 500 mL.

Egg sauce

50 mL fat 125 to 200 mL skim milk powder

50 mL flour 350 mL water

2 mL salt 15 mL finely chopped

Dash white pepper fresh parsley

2 chopped hard-cooked eggs

Melt fat. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Add parsley and eggs and heat through. Serve with fish or green vegetables, if desired. Makes about 500 mL.

Mushroom sauce

375 mL sliced mushrooms 4 mL salt

15 mL sliced green onion 0.5 mL white pepper

50 mL fat Dash cloves

10 mL lemon juice 125 to 200 mL skim milk powder

50 mL flour 350 mL water

Sauté mushrooms and onion in fat until onion is transparent. Remove from pan and sprinkle with lemon juice. Blend flour, seasonings and skim milk powder with liquid in pan. Gradually add water. Stir and cook until smooth and thick. Add mushrooms and onion and heat through. Serve with soufflé or chicken, if desired. Makes about 500 mL.

Onion sauce

175 mL sliced 3 mL salt

green onion 0.5 mL white pepper

50 mL fat 125 to 200 mL skim milk powder

50 mL flour 350 mL water

Sauté onion in fat until transparent. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Serve with hard-cooked eggs or meat patties, if desired. Makes about 500 mL.

Savory cream sauce

50 mL sliced green onion 0.5 mL oregano

50 mL fat 125 to 200 mL skim milk powder

50 mL flour 400 mL water

3 mL salt 30 mL horseradish

0.5 mL white pepper 5 mL prepared mustard

Sauté onion in fat until transparent. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Add horseradish and mustard and heat through. Serve with vegetables, if desired. Makes about 500 mL.

Quick supper dishes

Scalloped or au gratin dishes may be quickly prepared by combining cooked foods with cream or cheese sauce in a baking dish, topping with buttered crumbs, and baking to heat through. Creamed dishes may be even more quickly prepared by simply heating the sauce and cooked foods together in a saucepan and serving over toast, tea biscuits, patty shells, hot rice or noodles. To 200 mL medium cream sauce add 500 mL diced cooked meat, fish or poultry OR 625 to 750 mL cooked vegetables OR 6 hard cooked-eggs, quartered.

Main dishes

Skim milk powder can be used in many main dishes. It gives the benefit of extra milk without altering the liquid in the recipe.

Chili tarts

Filling

250 mL chopped onion
1 can (213 mL)
125 mL chopped tomato sauce
green pepper
5 mL salt
5 mL chili powder
500 g ground beef
1 mL pepper

Sauté onion and green pepper in fat until onion is transparent. Add beef and brown. Drain off excess fat. Add sauce and seasonings. Simmer, uncovered for 30 min.

Pastry

500 mL all-purpose flour	75 mL skim milk powder
20 mL baking powder	100 mL shortening
3 mL salt	175 mL water

Sift together first three ingredients. Add skim milk powder and mix thoroughly. Cut in shortening until mixture resembles fine bread crumbs. Stir in water to make soft dough. Knead on lightly floured board for 30 seconds. Roll to 3 mm thick, and cut in 12 rounds, 10 cm each and 12 rounds, 5 cm each. Place the 10 cm rounds in muffin tins. Spoon 50 mL meat mixture into each one. Top with a 5 cm round. Bake 10 to 15 min at 220°C. Makes 12 tarts.

CHEESE TOPPED CHILI TARTS Make as chili tarts but top each tart with a quarter slice of process cheese.

Meat loaf and patties

Add 75 mL skim milk powder to each 500 g of meat used in making loaf or patties.

Cabbage beef bake

500 g ground beef5 mL caraway seed100 mL beef drippings7 mL salt(or drippings plus oil)1 mL pepper100 mL all-purpose flour700 mL water100 mL skim milk powder1.5 L shredded cabbage

Brown beef. Drain; reserve drippings. Blend flour, skim milk powder and seasonings in reserved drippings. Gradually add water. Stir and cook until smooth and thick. Combine beef and cabbage with sauce. Pour into greased 2.5 L baking dish. Bake at 180°C until cabbage is tender-crisp (about 1 h). 6 servings.

Greek pastitsa

500 g ground pork 500 mL cooked macaroni (250 mL uncooked) 125 mL chopped onion 1 clove garlic, crushed 50 mL fat 1 can (796 mL) tomatoes 50 mL flour 1 can (156 mL) tomato paste 0.5 mL pepper 1 mL cinnamon 2 mL salt 1 mL nutmeg 125 mL skim milk powder 5 mL Worcestershire sauce 350 mL water 2 mL salt 1 beaten egg 5 mL sugar

Brown pork until fat coats pan. Add onion and garlic; sauté until onion is transparent. Drain off excess fat. Add tomatoes, tomato paste, seasonings and sugar. Simmer uncovered 1 h, stirring occasionally. Layer 250 mL macaroni in greased 2 L baking pan (20 cm square). Pour tomato sauce over macaroni and top with remaining macaroni. Melt fat. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Blend small amount of hot mixture into egg and then stir egg into remaining hot mixture. Stir and cook 1 min more. Pour over macaroni. Bake 45 min at 180°C. Let stand 20 min before serving. 6 servings.

Salmon loaf

1 can (439 g) salmon, 1 mL paprika 2 mL Worcestershire flaked 175 mL liquid from salmon sauce or liquid plus water 250 mL soft bread crumbs 250 mL skim milk powder 175 mL chopped celery 2 eggs 75 mL chopped onion 1 mL salt 25 mL chopped fresh parsley 25 mL lemon juice 0.5 mL pepper

Drain salmon; reserve liquid. Combine liquid and skim milk powder. Beat in eggs and seasonings. Mix with remaining ingredients and salmon.

Turn into greased 1.5 L loaf pan (20x10x7 cm). Bake at 180°C until knife inserted in center comes out clean (about 1 h). 6 servings.

Vegetables

Mashed potatoes

Boil 6 medium potatoes; save liquid and mash potatoes. Combine 75 to 125 mL skim milk powder, 50 mL butter and 2 mL salt. Blend in 75 mL cooking liquid. Add to mashed potatoes and beat until fluffy. Add more cooking liquid if necessary.

Scalloped potatoes

50 mL butter	350 mL water
50 mL flour	1.5 L thinly sliced
5 mL salt	potato (about 1 kg)
1 mL pepper	250 mL chopped onion
125 to 200 mL skim milk powder	•

Melt butter; blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Add potato and onion to sauce and cook over low heat until sauce comes to boil. Turn into greased baking dish. Bake covered at 180°C until sauce returns to boil (about 20 min), then uncover and continue baking until potato is tender (55 to 70 min more). 6 to 8 servings.

Creamed brussels sprouts and cucumbers

700 g brussels sprouts	0.5 mL pepper
2 medium cucumbers, peeled	175 mL skim milk powder
50 mL fat	500 mL chicken bouillon
50 mL flour	

Cook brussels sprouts in boiling salted water until tender (12 to 15 min). Drain. Cut cucumbers in half lengthwise; scoop out seeds. Cut in 1 cm slices. Sauté cucumber in fat until tender, remove from pan and add to brussels sprouts. Blend in flour, seasonings and skim milk powder. Gradually add chicken bouillon. Stir and cook until smooth and thick. Add brussels sprouts and cucumber. Heat through slowly. 6 servings.

Curried peas and onions

250 mL quartered small onions	5 mL curry powder
50 mL fat	75 mL skim milk powder
25 mL flour	350 mL water
2 mL salt	l package (340 mL) frozen
Dash pepper	peas, cooked

Sauté onion in fat until transparent. Blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Add peas and heat through. 6 servings.

Corn au gratin

125 mL sliced green onion
25 mL fat
25 mL water
250 mL water
2 cans (340 mL each) kernel
2 mL salt
250 mL (100 g) grated cheddar
250 mL basil

Sauté onion in fat until transparent. Stir in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Add corn. Layer half corn mixture in greased baking dish. Sprinkle half the cheese over corn. Top with remaining corn mixture, then remaining cheese. Bake 25 min at 180°C. 6 servings.

Broccoli scallop

700 g broccoli	175 mL skim milk powder
50 mL fat	500 mL water
50 mL flour	6 water chestnuts, sliced
5 mL salt	75 mL grated cheddar cheese
2 mL dry mustard	75 mL buttered soft
0.5 mL pepper	bread crumbs

Cut broccoli in bite-sized pieces. Cook in boiling salted water until just tender (about 10 min). Drain. While broccoli is cooking, melt fat; blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. Stir in broccoli and chestnuts. Turn into a greased baking dish. Combine cheese and bread-crumbs. Sprinkle over broccoli. Bake at 180°C until lightly browned (about 20 min). 6 servings.

Russian carrots

750 mL sliced, cooked carrots	75 mL skim milk powder
(about 700 g)	250 mL water
125 mL finely chopped green	5 mL salt
pepper	0.5 mL white pepper
30 mL fat	2 mL dry mustard
15 mL flour	1 mL ground caraway
	seed

While carrots are cooking, sauté green pepper in 15 mL fat for 5 min; set aside. Melt remaining 15 mL fat; blend in flour, seasonings and skim milk powder. Gradually add water. Stir and cook until smooth and thick. To serve, pour sauce over drained hot carrots and garnish with sautéed green pepper. 6 servings.

Creamed spinach casserole

500 mL medium cream sauce (using skim milk powder)

2 beaten eggs

2 packages (283 g each) cooked, chopped spinach (about 500 mL)

0.5 mL nutmeg

0.5 mL mace 1 mL salt 0.5 mL pepper 125 mL soft bread

crumbs

Prepare cream sauce. Blend small amount of hot cream sauce into egg and then stir egg into remaining cream sauce. Combine cream sauce mixture, spinach, seasonings and bread crumbs. Turn into greased 1 L baking dish. Set dish in pan of hot water. Bake 1 h at 160°C. Let stand 10 min before serving. 6 servings.

Desserts

Skim milk powder may be used in a great number of desserts. In milk desserts, such as custards, puddings and cream pie fillings, the skim milk powder is mixed with the dry ingredients. It can be whipped and used in gelatin or frozen desserts.

Basic pudding mix

400 mL cornstarch

5 mL salt 2 L skim milk powder 500 mL sugar

Combine all ingredients and sift three times. Store in tightly covered container. Makes 2.5 L.

VANILLA PUDDING Combine 500 mL basic pudding mix and 750 mL water. Stir and cook over direct heat until thickened (10 to 15 min). Stir in 25 mL butter. Cool slightly and add 15 mL vanilla. 6 servings.

CHOCOLATE PUDDING Make as vanilla pudding but add 50 mL cocoa and 50 mL sugar to basic pudding mix before adding water. 6 servings.

COCONUT PUDDING Make as vanilla pudding, cooking until thickened, stir in 125 mL coconut. 6 servings.

FRUIT PUDDING Make as vanilla pudding but add 1 can (284 mL) peach halves, drained and chopped, to cooled pudding. 6 servings.

PIE FILLING Make as any pudding variation but add a little hot thickened mixture to 2 beaten egg yolks. Stir egg yolks into remaining hot mixture and cook until thickened 1 to 2 min more. Pour into a baked 1 L pie shell (23 cm). Makes 950 mL filling.

Commercial pudding mix

Commercial pudding mixes using milk and requiring cooking may be made by substituting 75 mL skim milk powder and 250 mL water for each 250 mL of milk required. Combine skim milk powder with pudding mix and complete according to directions on the package, using water in place of milk. Instant puddings using milk may be made with reconstituted skim milk.

Easy fruit snow

Half 85 g package flavored jelly powder

250 mL boiling water

Dash salt

50 mL sugar

125 mL cold water

15 mL lemon juice

Dissolve jelly powder in boiling water. Chill until partially set. Combine cold water, lemon juice, skim milk powder and salt and beat until stiff peaks form (about 5 min). Gradually beat in sugar. Beat jelly until foamy and then fold into whipped mixture. Turn into jelly mold or individual dishes and chill until firm (about 1 h). Unmold if desired. 6 servings.

Lemon snow

1 envelope (7 g)
 unflavored gelatin
50 mL cold water
50 mL boiling water
15 mL lemon juice
15 mL lemon juice
175 mL skim milk powder
125 mL sugar
Dash salt
1 mL salt
50 mL sugar
2 mL grated lemon rind

Soak gelatin in 50 mL cold water 5 min. Add boiling water, 125 mL sugar, salt, lemon rind and 75 mL lemon juice. Stir until gelatin and sugar are dissolved. Chill until partially set. Combine 125 mL cold water, 15 mL lemon juice, skim milk powder, and salt. Blend well. Beat until mixture stands in firm peaks (about 5 min). Gradually beat in sugar. Beat gelatin mixture until foamy and then fold into whipped mixture. Turn into 2 L mold and chill until firm (about 3 h). Serve with custard sauce, if desired. 6 servings.

Whipped topping (for puddings or pies)

125 mL cold water Dash salt
15 mL lemon juice 50 mL sugar
175 mL skim milk powder 1 mL vanilla

Combine water, lemon juice, skim milk powder and salt. Beat until mixture stands in firm peaks (about 8 min). Gradually beat in sugar and vanilla. Chill. Makes about 1 L.

Spanish cream

3 egg yolks
1 mL salt
75 mL sugar
250 to 375 mL skim
milk powder
575 mL cold water

1.5 envelopes
unflavored gelatin
75 mL cold water
5 mL vanilla
3 egg whites
50 mL sugar

Beat together egg yolks, salt and 75 mL sugar. Sprinkle skim milk powder on top, add water gradually and combine thoroughly. Cook over hot water until thick (about 20 min). Soak gelatin in 75 mL cold water 5 min. Add soaked gelatin to egg yolk mixture, stirring until dissolved. Chill and then stir in vanilla. Continue chilling, stirring occasionally until mixture has thickened and becomes almost set. Beat egg whites until soft peaks form. Gradually beat in sugar until stiff peaks form. Fold meringue into egg yolk mixture. Turn into 1.5 L mold and chill until firm (about 3 h). Unmold and serve with custard sauce, if desired. 8 servings.

BUTTERSCOTCH SPANISH CREAM Make as Spanish cream but use 2 envelopes (7 g each) unflavored gelatin; add butterscotch mixture in place of 75 mL sugar, and add 500 mL skim milk powder. To make butterscotch mixture, melt 15 mL butter in heavy frypan, stir in 125 mL brown sugar and cook to a rich brown color. Immediately add 75 mL water and heat until sugar is dissolved. 8 servings.

CHOCOLATE SPANISH CREAM Make as Spanish cream but use 2 envelopes (7 g each) unflavored gelatin, 100 mL chocolate syrup* in place of 75 mL sugar, and 500 mL skim milk powder. 8 servings.

* See recipe on page 17.

Ruby cloud

1 package (425 g) frozen sweetened sliced strawberries
15 mL lemon juice
1.5 envelopes unflavored gelatin 50 mL cold water
125 mL cold water
15 mL lemon juice
175 mL skim milk powder
Dash salt
125 mL sugar

Thaw strawberries and drain 15 min; reserve syrup. Combine drained strawberries and 15 mL lemon juice. Soak gelatin in 50 mL cold water 5 min, then dissolve over hot water. Combine 125 mL cold water, 15 mL lemon juice, skim milk powder and salt; blend well. Beat until mixture stands in firm peaks (about 5 min). Gradually beat in sugar. Beat in dissolved gelatin; then reserved syrup. Fold in strawberries. Turn into 1.5 L mold and chill until firm (about 3 h). Unmold. Makes 1.5 L.

RASPBERRY CLOUD Make as ruby cloud but use one package (425 g) frozen sweetened raspberries in place of frozen strawberries. Makes 1.5 L.

Lemon chiffon pie

Half 7 g envelope unflavored gelatin 50 mL cold water 50 mL sugar 75 mL lemon juice 1 mL salt

1 slightly beaten egg

5 mL grated lemon rind

125 mL cold water 15 mL lemon juice

175 mL skim milk powder

Dash salt 125 mL sugar

1 baked 1 L (23 cm)

pie shell

Grated lemon rind

Soak gelatin in 50 mL cold water 5 min. In top of double boiler combine 50 mL sugar, 75 mL lemon juice, salt and egg. Cook, stirring constantly until just thickened (about 5 min). Add soaked gelatin, stirring until dissolved. Then add 5 mL lemon rind. Chill until mixture is partially set. Meanwhile, combine 125 mL cold water, 15 mL lemon juice, skim milk powder and salt; blend well. Beat until mixture stands in firm peaks (about 5 min). Gradually beat in 125 mL sugar. Fold in gelatin mixture. Turn into pie shell and chill until firm (about 1 h). Garnish with grated lemon rind. Makes one 1 L pie (23 cm).

Cream pie

75 mL sugar
2 beaten egg yolks
75 mL flour
1 mL salt
5 mL vanilla
2 egg whites
powder
250 mL cold water
5 mL sugar
2 beaten egg yolks
5 mL butter
5 mL vanilla
2 egg whites
Dash salt
50 mL sugar
1 baked 1 L (23 cm) pie shell

Combine sugar, flour, salt and skim milk powder. Add cold water and blend until smooth. Then gradually stir in hot water. Cook over hot water, stirring constantly, until mixture thickens (10 to 12 min). Continue cooking 10 min more, stirring occasionally. Stir a little hot mixture into egg yolks and then return to remaining hot mixture. Stir and cook 2 min more. Remove from heat and stir in butter and vanilla. Allow to cool, stirring occasionally. Pour into pie shell. Beat egg whites and salt until soft peaks form. Gradually beat in sugar until stiff peaks form. Spread meringue over pie, sealing well to edge of crust. Bake at 220°C until lightly browned (about 5 min). Makes one 1 L pie (23cm).

Baked custard

4 beaten eggs
75 mL sugar
1 mL salt
250 mL skim milk powder

125 mL cold water
625 mL hot water
2 mL vanilla

Combine eggs, sugar, salt and skim milk powder. Blend in cold water. Gradually add hot water and stir in vanilla. Pour into baking dish or

individual custard cups. Place in pan of hot water and bake at 180°C until custard is firm and knife inserted in center comes out clean (60 min for large; 30 min for small). Makes 1 L.

Custard sauce

3 beaten eggs 150 mL cold water 50 mL sugar 175 mL hot water 1 mL salt 2 mL vanilla

125 mL skim milk powder

Combine eggs, sugar, salt and skim milk powder and blend in cold water. Gradually stir in hot water. Cook over hot water, stirring until mixture begins to thicken (about 10 min). Immediately remove from heat. When cool stir in vanilla. Chill before serving. Makes about 500 mL.

Orange sherbet

1 package (85 g) orange jelly powder milk powder 500 mL water

1 can (178 mL) frozen orange juice concentrate, slightly thawed

Dissolve jelly powder in boiling water. Add concentrated orange juice and freeze until partially set. Whip until foamy. Combine skim milk powder and water. Add to foam and beat until well blended. Turn into 20 cm square pan and freeze. Stir when partially frozen (about 1 h). Continue freezing overnight. Remove from freezer 15 min before serving. 6 to 8 servings.

LEMON SHERBET Make as orange sherbet but use lemon jelly powder and frozen concentrated lemon juice in place of orange.

GRAPE SHERBET Make as orange sherbet but use grape jelly powder and frozen concentrated lemon juice in place of orange.

POPSICLES Make as orange, or lemon or grape sherbet but skim off foam, pour into popsicle containers and freeze. No need to stir while freezing. Makes about 10 popsicles, 100 mL each.

Chocolate syrup

250 mL cocoa
250 mL hot water
375 mL sugar
5 mL vanilla

Combine cocoa, sugar and salt. Stir in enough water to make a paste and then add remaining water. Bring to boil and cook 3 min, stirring constantly. Cool and stir in vanilla. Refrigerate. May be stored about 2 months in refrigerator. Makes about 500 mL.

Cold raspberry soufflé

250 mL ice water

300 mL skim milk powder

l envelope (7 g) unflavored gelatin

50 mL water

75 mL boiling water

75 mL sugar

25 mL grated lemon rind

75 mL oil

5 mL vanilla

10 mL lemon juice

1 package (425 mL) frozen sweetened raspberries,

thawed

Combine ice water and skim milk powder in a chilled bowl; beat until soft peaks form (about 10 min). Soak gelatin in 50 mL water 5 min. Add boiling water and stir until gelatin is dissolved. Gradually beat sugar into skim milk powder mixture. Then gradually beat in oil, vanilla, lemon juice and gelatin mixture. Freeze 10 to 15 min. Combine raspberries and lemon rind; purée in blender. Strain to remove seeds. Remove chilled mixture from freezer and gradually beat in raspberries until well blended. Wrap a 5 cm wide, double thickness of greased foil around the outside edge of 1 L soufflé dish. Allow foil to extend 3 cm above rim. Pour in raspberry mixture and chill 4 h or overnight. Remove foil just before serving. 6 to 8 servings.

Plain yogurt

500 mL skim milk powder 1.25 L lukewarm water 1 can (454 g) evaporated 50 mL Swiss-style plain yogurt OR homemade yogurt*

Combine skim milk powder, water and milk. Stir in yogurt and mix well. Pour into warm sterilized jars, filling to 2.5 cm from top. Cover with plastic wrap; then lids. Place in pan of lukewarm water (45°C). Water should be level with yogurt. Cover pan and put in warm place to maintain water temperature. A suitable place is in the center on top of 75 cm stove with oven set at about 110°C. Allow to stand, without disturbing, until set (2 to 4 h). Refrigerate overnight. May be stored in refrigerator for about 2 weeks. Makes about 2 L.

* Use homemade yogurt from latest batch. Make first batch with packaged dried or liquid yogurt culture according to package directions and prepare a batch about every 4 days. At end of 1 month begin with fresh culture.

Flavored yogurt

WITH JAM Add 25 mL to 250 mL plain yogurt and refrigerate 2 h to blend flavors.

WITH FRUIT Add 25 mL sugar to 250 mL plain yogurt. Combine 50 mL sliced or mashed fresh fruit sweetened with 15 mL sugar OR 50 mL chopped canned fruit and 25 mL syrup to 250 mL sweetened yogurt. Refrigerate 2 h to blend flavors.

Chocolate ice

2 egg whites 100 mL sugar

125 mL skim milk powder 40 mL chocolate syrup*

100 mL cold water

Combine egg whites, skim milk powder and water. Beat until mixture stands in firm peaks (about 8 min). Gradually beat in sugar and chocolate syrup. Pour into six individual serving dishes. Freeze until firm (about 4 to 5 h). 6 servings.

MOCHA ICE Make as chocolate ice but reduce sugar to 50 mL, water to 25 mL and add 75 mL cold strong coffee. Continue as above. 6 servings.

* See recipe on page 17.

Beverages

Refreshing beverages made with skim milk powder include reconstituted and modified skim milk, partly skimmed milk (page 5), eggnogs and cocoa.

Eggnog

5 eggs

25 mL sugar

Dash salt

0.5 mL nutmeg

500 mL cold water

250 mL skim milk powder

5 mL vanilla

Nutmeg

Beat eggs slightly. Blend in sugar, salt and nutmeg. Combine water and skim milk powder. Gradually stir into egg mixture. Stir in vanilla, strain and chill. Pour into glasses and sprinkle lightly with nutmeg. Makes about 1 L.

CHOCOLATE EGGNOG Make as eggnog but add 50 mL chocolate syrup.*

* See recipe page 17.

Instant cocoa mix

1 L skim milk powder 175 mL cocoa 250 mL sugar

Combine ingredients and sift. Store in airtight container at room temperature. Makes about 1.5 L.

HOT CHOCOLATE Combine 100 mL cocoa mix with 200 mL boiling water. 1 serving.

MOCHA MILK Make as hot chocolate but add 7 mL instant coffee. 1 serving.

CHOCOLATE MILK Combine 75 mL cocoa mix with 200 mL cold water. 1 serving.

Baked products

Skim milk powder can be substituted for fluid milk in any recipe for baked products such as breads, rolls, tea biscuits, muffins, cakes and cookies. Combine skim milk powder with the dry ingredients and add water as the liquid.

Full o'energy bars

500 mL whole wheat flour 125 mL chopped dried apricots

125 mL brown sugar 125 mL sunflower seeds

50 mL skim milk powder 2 eggs 50 mL wheat germ 150 mL oil

5 mL baking powder 125 mL molasses

250 mL raisins

Combine flour, sugar, skim milk powder, wheat germ, baking powder, raisins, apricots and sunflower seeds. Mix together remaining ingredients and add to dry ingredients, blending well. Spread in greased 2.5 L baking pan (23 cm square). Bake 35 min at 180°C. Cool and cut in bars. Makes 32 bars.

Whole wheat biscuit mix

875 mL all-purpose flour
75 mL baking powder
10 mL salt

875 mL whole wheat flour
250 mL skim milk powder
375 mL shortening

Sift together all-purpose flour, baking powder and salt. Add whole wheat flour, and skim milk powder, mix thoroughly. Cut in shortening until mixture resembles fine bread crumbs. Store in covered container in a cool place. Makes about 2.5 L.

WHOLE WHEAT TEA BISCUITS To 750 mL whole wheat biscuit mix, stir in 175 mL water to make soft dough. Turn out on floured board and knead gently for 30 seconds. Roll to 2 cm thickness and cut in 5 cm rounds. Bake 8 min at 230°C or 10 min at 220°C. Makes about 14 biscuits.

Blueberry muffins

750 mL whole wheat 1 beaten egg
biscuit mix 250 mL water
75 mL sugar 10 mL lemon juice

5 mL finely grated 250 mL frozen blueberries, lemon rind thawed, drained

Combine first three ingredients. Mix egg, water and lemon juice and stir into dry ingredients until just blended. Fold in blueberries. Fill greased muffin tins two-thirds full. Bake 18 to 20 min at 200°C. Makes 12 muffins.

Biscuit topping

Prepare biscuit dough using method for whole wheat tea biscuits. Roll dough in rectangle 0.5 cm thick. Brush lightly with melted shortening and sprinkle with chopped parsley and grated carrot. Roll like a jelly roll. Cut in 2 cm slices. Use as topping for meat pie and bake about 30 min at 200°C; or bake as tea biscuits and serve with stew.

Commercial biscuit mix

When using a biscuit mix, substitute 75 mL skim milk powder and 250 mL water for each 250 mL of milk required in recipe. Stir the skim milk powder into the measured mix and complete according to directions on the package, using water in place of milk.

Breakfast cereals

When cooking breakfast, mix skim milk powder with cereal. Add slowly to boiling salted water, stirring constantly to prevent lumping. Allow 25 to 50 mL skim milk powder for each 250 mL of water used.

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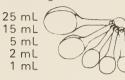
KITCHEN METRICS

VOLUME

Use metric measures for metric recipes. Measures are marked in millilitres (mL) and are available in the following sizes:







TEMPERATURE

Most commonly used oven temperatures

°C repla	ices °F	°C replaces	°F
100	200	190	375
150	300	200	400
160	325	220	425
180	350	230	450

Refrigerator temperature: 4°C replaces 40°F Freezer temperature: -18°C replaces 0°F

MASS

 $1\ kg\ (1000\ g)$ is slightly more than $2\ pounds$ $30\ g$ is about $1\ ounce$

LENGTH

1 cm (10 mm) is slightly less than 1 2 inch 5 cm is about 2 inches

PRESSURE

Pressure for pressure cookers and canners is measured in kilopascals (kPa) instead of pounds per square inch (PSI).

kPa	replaces	PS
35		5
70		10
100		15

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