

Ingredient Substitutions and Equivalents



This publication has useful information on substitutions and equivalents. But remember that your substituted ingredient may not perform just like the original in the recipe.

Many substitutions or equivalents will perform the same: 4 ounces of spaghetti for 4 ounces of other type noodles. Other substitutes have similar properties but will not perform exactly the same. For example, 1 cup of white sugar and 1 cup of honey both will make your dessert sweet, but the honey will also make the product brown more, add a flavor of its own, and require you to decrease other liquids in the recipe.

Each ingredient has a specific function, and substitutions could result in changes. Therefore, use substitutions for emergencies or when you don't mind a slight variation in the taste or substance.



Ingredient	Amount	Substitute or Equivalent
Allspice	1 tsp	= 1/2 tsp cinnamon and 1/2 tsp ground cloves
Apples	1 lb	= 3 or 4 medium = 3 c sliced
Apple pie spice	1 tsp	= 1/2 tsp cinnamon, 1/4 tsp nutmeg, and 1/8 tsp cardamom
Arrowroot starch	1 1/2 tsp	= 1 tbsp flour = 1 1/2 tsp cornstarch
Asparagus	1 lb	= 16 to 20 spears
Baking powder	1 tsp	= 1/3 tsp baking soda and 1/2 tsp cream of tartar = 1/4 tsp baking soda and 1/2 c sour milk or buttermilk (Decrease liquid called for in recipe by 1/2 c.) = 1/4 tsp baking soda and 1/2 tsp vinegar or lemon juice used with sweet milk to make 1/2 c (Decrease liquid called for in recipe by 1/2 c.)
Bananas	1 lb	= 3 or 4 medium = 1 3/4 c mashed
Bay leaf	1 whole	= 1/4 tsp crushed
Beans, white	1 lb uncooked	= 2 c uncooked = 6 c cooked
Beans, green	1 lb	= 3 c
Beans, kidney	1 lb uncooked	= 1 1/2 c uncooked = 9 c cooked
Beans, lima, dry shelled	1 lb uncooked	= 3 c uncooked = 6 c cooked
Beau Monde	1 tsp	= 1 tsp seasoning or seasoned salt = 1/2 tsp salt = 1/2 tsp Mei Yen seasoning
Beets without tops	1 lb	= 2 c sliced
Blackberries	1 qt	= 1 1/4 lb = 3 to 4 c
Blueberries	1 lb	= 2 c
Bread	1 slice dry 1 slice soft bread	= 1/3 c dry breadcrumbs = 3/4 c soft breadcrumbs
Broccoli	1 lb	= 2 c
Broth, beef or chicken	1 c	= 1 bouillon cube dissolved in 1 c boiling water = 1 envelope powdered broth base dissolved in 1 c boiling water = 1 1/2 tsp powdered broth base dissolved in 1 c boiling water
Butter	1 c	= 7/8 to 1 c hydrogenated fat and 1/2 tsp salt = 7/8 c lard plus 1/2 tsp salt = 1 c margarine
Buttermilk (sourmilk)	1 c	= 1 c plain yogurt = 1 c whole or skim milk plus 1 tbsp lemon juice or white vinegar = 1 c milk plus 1 3/4 tsp cream of tartar
Brussels sprouts	1 lb	= 4 c
Cabbage	1 lb shredded 1 lb cooked	= 3 1/2 to 4 1/2 c = 2 c

Ingredient	Amount	Substitute or Equivalent
Carrots	1 lb without tops	= 3 c
	1 lb shredded	= 2 1/2 c
Cauliflower	1 lb	= 1 1/2 c
Celery	1 lb	= 2 bunches
Cheese	1 lb	= 4 to 5 c, grated
	1 c grated	= 4 oz (approximately)
Cherries	1 lb	= 2 1/3 c
Chicken	1 1/2 lb boned	= 1 c cooked, diced
Chili sauce	1 c	= 1 c tomato sauce, 1/4 c brown sugar, 2 tbsp vinegar, 1/4 tsp cinnamon, dash of ground cloves, and dash of allspice = 1 c ketchup, 1/4 tsp cinnamon, dashes of ground cloves and allspice
Chives, finely chopped	2 tsp	= 2 tsp green onion tops, finely chopped
Chocolate, chips semisweet	1 oz	= 1 oz sweet cooking chocolate
Chocolate, semisweet	1 2/3 oz	= 1 oz unsweetened chocolate plus 4 tsp sugar
	6 oz package	= 1 c
Chocolate, unsweetened	1 oz or square	= 3 tbsp cocoa plus 1 tbsp fat
Cocoa	1/4 c or 4 tbsp	= 1 oz (square) unsweetened chocolate (Decrease fat called for in recipe by 1/2 tbsp.)
Coconut	1 lb	= 5 c fresh coconut, shredded
Coconut cream	1 c	= 1 c whipping cream
Coconut milk	1 c	= 1 c whole or 2% milk
Coffee, ground	1 lb	= 80 tbsp (makes 40 to 50 c of brewed coffee)
Corn	12 ears	= 2 1/2 c cooked
Cornmeal, self-rising	1 c	= 7/8 c plain, 1 1/2 tbsp baking powder, and 1/2 tsp salt
	1 lb	= 3 c
Corn syrup	1 c	= 7/8 c sugar and 2 tbsp water = 7/8 c honey (Baked goods will brown more.)
Cornstarch (for thickening)	1 tbsp	= 2 tbsp all-purpose flour = 2 tbsp granular tapioca
Cracker crumbs	3/4 c	= 1 c dry bread crumbs
Cranberries	1 lb	= 4 c
Cream, heavy (36% to 40% fat)	1 c	= 3/4 c milk and 1/3 c butter or margarine (for use in cooking or baking)
		= 2 to 2 1/2 c whipped
Cream, light (18% to 20% fat)	1 c	= 3/4 c milk and 3 tbsp butter or margarine (for use in cooking or baking)
		= 1 c evaporated milk, undiluted
Cream, whipped		= Chill a 13-oz can of evaporated milk until ice crystals form. Add 1 tsp lemon juice. Whip until stiff.
Dates	1 lb	= 2 1/2 c pitted

Ingredient	Amount	Substitute or Equivalent
Dill plant, fresh or dried	3 heads	= 1 tbsp dill seed
Egg, whole, uncooked	1 large (3 tbsp)	= 3 tbsp and 1 tsp thawed frozen egg = 2 1/2 tbsp sifted, dry whole egg powder and 2 1/2 tbsp lukewarm water = 2 yolks and 1 tbsp water (in cookies) = 2 yolks (in custards, cream fillings, and similar mixture) = 2 whites as a thickening agent
Eggs, uncooked	1 c	= 5 large eggs = 6 medium eggs
Eggplant, diced, cooked	1 lb	= 2 1/2 c
Egg white	1 large (2 tbsp)	= 2 tsp thawed frozen egg white = 2 tbsp sifted, dry egg white powder, and 2 tbsp lukewarm water
	1 c	= 8 large egg whites
Egg yolk	1 yolk (1 1/2 tbsp)	= 3 1/2 tbsp thawed frozen egg yolk = 2 tbsp sifted, dry egg yolk
	1 c	= 12 large egg yolks
Flour, all-purpose (for thickening)	1 tbsp	= 1 1/2 tsp cornstarch, arrowroot starch, potato starch, or rice starch = 1 tbsp granular tapioca = 1 tbsp waxy rice flour = 2 tbsp browned flour = 1 1/2 tbsp whole wheat flour = 1/2 tbsp whole wheat flour and 1/2 tbsp all-purpose flour = 1 tbsp quick-cooking tapioca
Flour, all-purpose	1 c sifted	= 1 c and 2 tbsp cake flour = 1 c rolled oats, crushed = 1/2 c cornmeal or soybean flour and 2/3 c all-purpose flour = 1/2 c cornmeal, bran, rice flour, or whole wheat flour and 1/2 c all-purpose flour = 3/4 c whole wheat flour or bran flour and 1/4 c all-purpose flour = 1 c rye or rice flour = 1/4 c soybean flour and 3/4 c all-purpose flour
	1 lb	= 4 c sifted = 3 1/3 c, unsifted
Flour, cake	1 lb	= 4 3/4 c
	1 c sifted	= 1 c minus 2 tbsp sifted all-purpose flour (7/8 c)
Flour, self-rising	1 c	= 1 c minus 2 tsp all-purpose flour, 1 1/2 tsp baking powder, and 1/2 tsp salt
Flour, whole wheat	1 lb	3 3/4 c
<p>Note: Substitutes for white flours added to most baked goods will result in reduced volume and a heavier product. Substitute no more than 1/4 of white flour in a cake to ensure success. In other recipes, you can substitute whole wheat flour for 1/4 to 1/2 of white flour.</p>		
Garlic	1 clove, small	= 1/8 tsp garlic powder
Garlic salt	1 tsp	= 1/8 tsp garlic powder plus 7/8 tsp salt
Gelatin, flavored	3 oz	= 1 tbsp plain gelatin and 2 c fruit juice
Ginger	1/8 tsp	= 1 tsp candied ginger rinsed in water to remove sugar, then finely cut = 1 tbsp raw ginger
Grapes	1 lb	= 2 c seeded = 2 1/2 c seedless
Greens, cooked	1 lb	= 4 to 6 c

Ingredient	Amount	Substitute or Equivalent
Herbs, fresh	1 tbsp, chopped	= 1/2 tsp dried crushed herbs
Honey	1 c	= 1 1/4 c sugar and 1/4 c water
Horseradish	1 tbsp	= 2 tbsp bottled fresh
Ketchup	1 c	= 1 c tomato sauce, 1/4 c brown sugar, and 2 tbsp vinegar (for use in cooking) = 1 to 2 tsp grated peel
Lemon juice	1 tsp juice	= 1/2 tsp vinegar
Lemon peel, dried	1 tsp	= 1 to 2 tsp grated fresh lemon peel = grated peel of 1 medium lemon = 1/2 tsp lemon extract
Lettuce head	1 lb	= 6 1/4 c
Leaf		= 6 1/4 c
Romaine		= 6 c
Endive		= 4 1/4 c
Lime	1 medium	= 1 1/2 to 2 tbsp juice
Macaroni, 1-inch pieces	2 c uncooked (1/2 lb)	= 4 c cooked = 2 c spaghetti, uncooked = 4 c noodles, uncooked = 8 oz any pasta
Maple sugar (grated and packed)	1/2 c 1 tbsp	= 1 c maple syrup = 1 tbsp white, granulated sugar
Marshmallows, miniature	1 c	= 10 large
Mayonnaise (for use in salads and salad dressings)	1 c	= 1/2 c yogurt and 1/2 c mayonnaise = 1 c sour cream = 1 c cottage cheese pureed in a blender
Mei Yen seasoning	1 tsp	= 1 tsp Beau Monde seasoning = 1/2 tsp salt
Milk, buttermilk (or sour)	1 c	= 1 c plain yogurt = 1 c minus 1 tbsp sweet milk and 1 tbsp lemon juice or vinegar (Allow to stand 20 minutes at room temperature.) = 1 c sweet milk and 1 3/4 tsp cream of tartar
Milk, skim	1 c	= 4 to 5 tbsp non-fat dry milk powder and enough water to make 1 c or follow manufacturer's directions = 1/2 c evaporated milk and 1/2 c water
Milk, sweetened condensed	1 can (about 1 1/3 c)	= Heat the following ingredients until sugar and butter are dissolved: 1/3 c plus 2 tbsp evaporated milk, 1 c sugar, and 3 tbsp butter or margarine. = Add 1 c plus 2 tbsp dry milk to 1/2 c warm water. Mix well. Add 3/4 c sugar and 3 tbsp melted butter or margarine. Stir until smooth.
Milk, whole	1 c	= 1 c reconstituted non-fat dry milk (Add 2 tbsp butter or margarine, if desired.) = 1/2 c evaporated milk and 1/2 c water = 4 tbsp whole dry milk and 1 c water (or follow manufacturer's directions) = 1 c fruit juice or 1 c potato water (for use in baking)
Mushrooms, fresh	1 lb	= 2 to 3 c whole = 3 oz dried = 5 c sliced = 1 10-oz can (8 oz, drained weight)

Ingredient	Amount	Substitute or Equivalent
Mushrooms, canned	4 oz	= 2 c sliced fresh = 6 tbsp whole, dried mushrooms
Mustard, dry	1 tsp	= 1 tbsp prepared mustard
Noodles, 1-inch pieces	1 lb	= 6 to 8 c uncooked = 8 c cooked
Okra	1 lb	= 2 1/4 c cooked
Onion, fresh	1 small	= rehydrate 1 tbsp instant minced onion
Onion powder	1 tbsp	= 1 medium onion, chopped = 4 tbsp fresh chopped onion
Onions	1 lb	= 3 large onions = 2 to 2 1/2 c chopped
Orange	1 medium	= 1/3 to 1/2 c juice = 2 to 3 tbsp grated peel
Orange peel, dried	1 tbsp 2 tsp	= 2 to 3 tbsp grated orange peel = grated peel of 1 medium orange = 1 tsp orange extract
Parsley, dried	1 tsp	= 3 tsp fresh parsley, chopped
Parsnips	1 lb	= 4 medium parsnips = 2 c cooked
Peaches	1 lb	= 4 medium = 2 c sliced
Pears	1 lb	= 4 medium = 2 1/3 c sliced
Peas, green, in pod	1 lb	= 1 c shelled = 1 c cooked
Peas, black-eyed	1 lb	= 2 1/3 c cooked
Pecans	1 lb	= 3 1/2 c nut meats
Peppers, green bell	1 tbsp dried	= 3 tbsp fresh green pepper, chopped
Peppers, red bell	1 tbsp dried	= 3 tbsp fresh red pepper, chopped = 2 tbsp chopped pimiento
Peppermint, dried	1 tbsp	= 1/4 c chopped fresh mint
Pimiento	2 tbsp dried	= 1 tbsp dried red bell peppers, rehydrated = 3 tbsp fresh red bell pepper, chopped
Plums	1 lb	= 8 to 20 whole = 2 c halves
Potatoes, white	1 lb whole cooked, diced, or sliced 1 lb mashed	= 3 medium = 2 1/4 c = 1 3/4 c
Prunes	1 lb	= 2 1/4 c pitted
Pumpkin, mashed, cooked	1 lb	= 1 c

Ingredient	Amount	Substitute or Equivalent
Pumpkin pie spice	1 tsp	= 1/2 tsp cinnamon, 1/4 tsp ginger, 1/8 tsp allspice, and 1/8 tsp nutmeg
Radishes	6 oz	= 1 1/4 c sliced
Raisins	1 lb	= 2 3/4 c
Rennet	1 tablet	= 1 tbsp liquid rennet
Rhubarb, fresh	1 lb	= 2 c cooked = 4 to 8 pieces
Rice	1 lb 1 c regular, uncooked	= 6 c cooked = 2 c uncooked = 1 c uncooked converted rice = 1 c uncooked brown rice = 1 c uncooked wild rice = 2 c cooked
Rice, instant	1 to 2 c uncooked	= 1 cup cooked
Rutabaga	1 lb	= 2 1/2 c cubed = 2 c cooked
Shortening, melted	1 c	= 1 c cooking oil (Do not substitute unless recipe calls for melted shortening.)
Shortening, solid (used in baking)	1 c	= 1 c minus 2 tbsp lard (7/8 c) = 1 1/8 c butter (Decrease salt called for in recipe by 1/2 tsp.)
Sour cream, cultured	1 c	= 3/4 c sour milk or buttermilk and 1/3 c butter or margarine = Blend until smooth: 1/3 c buttermilk, 1 tbsp lemon juice, and 1 c cottage cheese = 1 c plain yogurt = 3/4 c milk, 3/4 tsp lemon juice, and 1/3 c butter or margarine
Spaghetti	1 lb	= 4 to 5 c 2-inch pieces = 9 c cooked
Spearmint, dried	1 tbsp	= 1/4 c chopped fresh mint
Spinach	1 lb	= 4 c fresh = 1 1/2 c cooked
Squash, summer	1 lb	= 1 2/3 c cooked and mashed
Squash, winter	1 lb	= 1 c cooked and mashed
Strawberries	1 qt	= 4 c sliced
Sugar, brown	1 c firmly packed 1 lb	= 1 c granulated sugar = 2 1/4 c firmly packed
Sugar, granulated	1 lb 1 tsp 1 c	= 2 1/4 c = 1/8 tsp noncaloric sweetener solution or follow manufacturer's directions = 1 1/2 c corn syrup (Decrease liquid called for in recipe by 1/4 c.) = 1 1/3 c molasses (Decrease liquid called for in recipe by 1/3 c.) = 1 c powdered sugar = 1 c brown sugar, firmly packed = 3/4 c honey (Decrease liquid called for in recipe by 1/4 c; for each c of honey in baked goods, add 1/2 tsp soda.)
Sugar, powdered	1 lb	= 2 3/4 c
Sweet potatoes	1 lb	= 3 medium

Ingredient	Amount	Substitute or Equivalent
Tapioca, granular	1 tbsp	= 2 tbsp pearl tapioca
Tomatoes, fresh	1 lb 2 c chopped	= 3 to 4 small = 1 16-oz can (may need to drain)
Tomato juice	1 c	= 1/2 c tomato sauce and 1/2 c water
Turnips	1 lb	= 3 medium turnips = 2 c cooked
Worcestershire sauce	1 tsp	= 1 tsp bottled steak sauce
Yeast, active dry	1 tsp	= cake yeast, compressed = 1 package (1/4 oz) active dry yeast
Yogurt, plain	1 c	= 1 c buttermilk = 1 c cottage cheese blended until smooth = 1 c sour cream

Equivalent Measures

This Much	Equals This Much	This Much	Equals This Much
1 gallon	4 quarts	3/8 cup	6 tablespoons
1 quart	2 pints	1/3 cup	5 1/3 tablespoons
1 pint	2 cups	1/4 cup	4 tablespoons
1 bushel	4 pecks	1/8 cup	2 tablespoons
1 peck	8 quarts	1/16 cup	1 tablespoon
1 cup	16 tablespoons	1 tablespoon	3 teaspoons
7/8 cup	14 tablespoons or 1 cup minus 2 tablespoons	3/4 tablespoon	2 1/4 teaspoons
3/4 cup	12 tablespoons	2/3 tablespoon	2 teaspoons
2/3 cup	10 2/3 tablespoons	1/2 tablespoon	1 1/2 teaspoons
5/8 cup	10 tablespoons	1/3 tablespoon	1 teaspoon
1/2 cup	8 tablespoons	1/4 tablespoon	3/4 teaspoon
		Pinch or dash	1/16 teaspoon

c = cup lb = pound oz = ounce fl oz = fluid ounce qt = quart tbsp = tablespoon tsp = teaspoon

Publication 1690 (POD-10-15)

Distributed in Mississippi by Brent J. Fountain, PhD, RD, LD, Associate Extension Professor, Food Science, Nutrition, and Health Promotion.



Copyright 2015 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

Produced by Agricultural Communications.

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. GARY B. JACKSON, Director