

# Ingredient Substitution and Equivalent Chart

HE-585

This publication has useful information on substitutions and equivalents. However, remember 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 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 will each 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 the chart for emergencies or when you don't mind a slight variation in taste or substance.

Ingredient	Amount	Substitute or Equivalent
Allspice	1 t.	= ½ t. cinnamon and ½ t. ground cloves
Apples	1 lb.	= 3 or 4 medium apples, or 3 c. sliced
Apple pie spice	1 t.	= ½ t. cinnamon, ¼ t. nutmeg, and ⅓ t. cardamon
Arrowroot starch	1½ t.	= 1 T. flour or 1½ t. cornstarch
Asparagus	1 lb.	= 16 to 20 spears
Baking powder	1 t.	= ⅓ t. baking soda and ½ t. cream of tartar = ¼ t. baking soda and ½ c. sour milk or buttermilk (decrease liquid called for in recipe by ½ c.) = ¼ t. baking soda and ½ t. vinegar or lemon juice used with sweet milk to make ½ c. (decrease liquid called for in recipe by ½ c.)
Bananas	1 lb.	= 3 or 4 medium or 1¾ c. mashed
Bay leaf	1 whole	= ¼ t. crushed
Beans, white	1 lb. uncooked	= 2 c. uncooked = 6 c. cooked
Beans, green	1 lb.	= 3 c.
Beans, kidney	1 lb. uncooked	= 1½ c. uncooked, or 9 c. cooked
Beans, lima, dry shelled	1 lb. uncooked	= 3 c. uncooked, or 6 c. cooked
Beau Monde	1 t.	= 1 t. seasoning or seasoning salt = ½ t. salt = ½ t. Mei Yen seasoning
Beets without tops	1 lb.	= 2 c. sliced
Blackberries	1 qt.	= 1¼ lb. = 3 to 4 c.
Blueberries	1 lb.	= 2 c.
Bread	1 slice dry 1 slice soft bread	= ⅓ c. dry breadcrumbs = ¾ c. soft breadcrumbs
Broccoli	1 lb.	= 2 c.
Broth, beef or chicken	1 c.	= 1 boullion cube dissolved in 1 c. boiling water = 1 envelope powdered broth base dissolved in 1 c. boiling water = 1½ t. powdered broth base dissolved in 1 c. boiling water
Butter	1 c.	= ⅞ to 1 c. hydrogenated fat and ½ t. salt = ⅞ c. lard plus ½ t. salt = 1 c. margarine
Buttermilk (sour milk)	1 c.	= 1 c. plain yogurt = 1 c. whole or skim milk plus 1 T. lemon juice or white vinegar = 1 c. milk plus 1¾ t. cream of tartar

Brussels spouts	1 lb.	= 4 c.
Cabbage	1 lb. shredded 1 lb. cooked	= 3½ to 4½ c. = 2 c.
Carrots	1 lb. without tops 1 lb. shredded	= 3 c. = 2½ c.
Catsup	1 c.	= 1 c. tomato sauce, ¼ c. brown sugar, and 2 T. vinegar (for use in cooking)
Cauliflower	1 lb.	= 1½ c.
Celery	1 lb.	= 2 bunches
Cheese	1 lb. 1 c. grated	= 4 to 5 c., grated = 4 oz. (approx.)
Cherries	1 lb.	= 2⅓ c.
Chicken	1½ lb. boned	= 1 c. cooked, diced
Chili sauce	1 c.	= 1 c. tomato sauce, ¼ c. brown sugar, 2 T. vinegar, ¼ t. cinnamon, dash of ground cloves, and dash of allspice
Chives, finely chopped	2 t.	= 2 t. green onion tops, finely chopped
Chocolate, chips semi-sweet	1 oz.	= 1 oz. sweet cooking chocolate
Chocolate, semisweet	1⅔ oz. 6 oz. package	= 1 oz. unsweetened chocolate and 4 t. sugar = 1 c.
Chocolate, unsweetened	1 oz. or square	= 3 T. cocoa and 1 T. fat
Cocoa	¼ c. or 4 T.	= 1 oz. (square) unsweetened chocolate (decrease fat called for in recipe by ½ T.)
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 t. or approx. 40 cups
Corn	1 doz. ears	= 2½ c. cooked
Cornmeal, self rising	1 c. 1 lb.	= ⅞ c. plain, 1½ T. baking powder, and ½ t. salt = 3 c.
Corn syrup	1 c.	= ⅞ c. sugar and 2 T. water = ⅞ c. honey (baked goods will brown more)
Cornstarch (for thickening)	1 T.	= 2 T. all-purpose flour = 2 T. granular tapioca
Cracker crumbs	¾ c.	= 1 c. dry bread crumbs
Cranberries	1 lb.	= 4 c.
Cream, heavy (36% to 40% fat)	1 c.	= ¾ c. milk and ⅓ c. butter or margarine (for use in cooking and baking) = 2 to 2½ c. whipped
Cream, light (18% to 20% fat)	1 c.	= ¾ c. milk and 3 T. butter or margarine (for use in cooking and baking) = 1 c. evaporated milk, undiluted
Cream, whipped		= Chill a 13-oz. can of evaporated milk until ice crystals form. Add 1 t. lemon juice. Whip until stiff.
Dates	1 lb.	= 2½ c. pitted
Dill plant, fresh or dried	3 heads	= 1 T. dill seed
Eggs, whole, uncooked	1 large (3 T.)	= 3 T. and 1 t. thawed frozen egg = 2½ T. sifted, dry whole egg powder and 2½ T. lukewarm water = 2 yolks and 1 T. 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
Egg plant, diced, cooked	1 lb.	= 2½ c.

Egg white	1 large (2 T.) 1 c.	= 2 t. thawed frozen egg white = 2 T. sifted, dry egg white powder, and 2 T. lukewarm water = 8 large egg whites
Egg yolk	1 yolk (1½ T.)	= 3½ T. thawed frozen egg yolk = 2 T. sifted, dry egg yolk = 12 large egg yolks
Flour, all-purpose (for thickening)	1 T.	= 1½ t. cornstarch, arrowroot starch, potato starch, or rice starch = 1 T. granular tapioca = 1 T. waxy rice flour = 2 T. browned flour = 1½ T. whole wheat flour = ½ T. whole wheat flour and ½ T. all-purpose flour = 1 T. quick-cooking tapioca
Flour, all-purpose	1 c. sifted  1 lb.	= 1 c. and 2 T. cake flour = 1 c. rolled oats, crushed = ½ c. cornmeal or soybean flour and ⅔ c. all-purpose flour = ½ c. cornmeal, bran, rice flour, or whole wheat flour and ½ c. all-purpose flour = ¾ c. whole wheat flour or bran flour and ¼ c. all-purpose flour = 1 c. rye or rice flour = ¼ c. soybean flour and ¾ c. all-purpose flour = 4 c. sifted = 3⅓ c., unsifted
Flour, cake	1 lb. 1 c. sifted	= 4¾ c. = 1 c. minus 2 T. sifted all-purpose flour (⅞ c.)
Flour, self rising	1 c.	= 1 c. minus 2 t. all-purpose flour, 1½ t. baking powder, and ½ t. salt
Flour, whole-wheat	1 lb.	= 3¾ c.
Note: substitutes for white flours added to most baked goods will result in a reduced volume and a heavier product. Substitute no more than ¼ of white flour in a <b>cake</b> to ensure success. In other recipes, you can substitute whole wheat flour for ¼ to ½ of white flour.		
Garlic	1 clove, small	= ⅛ t. garlic powder
Garlic salt	1 teaspoon	= ⅛ garlic powder + ⅞ t. salt
Gelatin, flavored	3-ounce	= 1 T. plain gelatin and 2 c. fruit juice
Ginger	⅛ t.	= 1 T. candied ginger rinsed in water to remove sugar; then finely cut = 1 T. raw ginger
Grapes	1 lb.	= 2 c. seeded = 2½ c. seedless
Greens, cooked	1 lb.	= 4 to 6 c.
Herbs, fresh	1 T., chopped	= ½ t. dried crushed herbs
Honey	1 c.	= 1¼ c. sugar and ¼ c. water
Horseradish	1 T.	= 2 T. bottled fresh
Lemon	1 medium	= 1 to 3 T. juice = 1 to 2 t. grated peel
Lemon juice	1 t. juice	= ½ t. vinegar
Lemon peel, dried	1 t.	= 1 to 2 t. grated fresh lemon peel = grated peel of 1 medium lemon = ½ t. lemon extract
Lettuce, head	1 lb.	= 6¼ c.
Leaf	1 lb.	= 6¼ c.
Romaine	1 lb.	= 6 c.
Endive	1 lb.	= 4¼ c.
Lime	1 medium	= 1½ to 2 T. juice

Macaroni, 1-inch pieces	2 c. uncooked (½ lb.)	= 4 c. cooked = 2 c. spaghetti, uncooked = 4 c. noodles, uncooked = 8 oz. any pasta
Maple sugar (grated and packed)	½ c. 1 T.	= 1 c. maple syrup = 1 T. white, granulated sugar
Marshmallows, miniature	1 c.	= 10 large
Mayonnaise (for use in salads and salad dressings)	1 c.	= ½ c. yogurt and ½ c. mayonnaise = 1 c. sour cream = 1 c. cottage cheese pureed in a blender
Mei Yen seasoning	1 t.	= 1 t. Beau Monde seasoning = ½ t. salt
Milk, buttermilk (or sour)	1 c.	= 1 c. plain yogurt = 1 c. minus 1 T. sweet milk and 1 T. lemon juice or vinegar (allow to stand 20 minutes at room temperature) = 1 c. sweet milk and 1¾ t. cream of tartar
Milk, skim	1 c.	= 4 to 5 T. non-fat dry milk powder and enough water to make 1 c. or follow manufacturer's directions. = ½ cup evaporated milk and ½ cup water
Milk, sweetened condensed	1 can (about 1⅓ c.)	= Heat the following ingredients until sugar and butter are dissolved: ⅓ c. plus 2 T. evaporated milk, 1 c. sugar, and 3 T. butter or margarine = Add 1 c. plus 2 T. dry milk to ½ c. warm water. Mix well. Add ¾ c. sugar and 3 T. melted butter or margarine. Stir until smooth.
Milk, whole	1 c.	= 1 c. reconstituted non-fat dry milk (add 2 t. butter or margarine, if desired) = ½ c. evaporated milk and ½ c. water = 4 T. 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)
Mushrooms, canned	4 oz.	= 2 c. sliced fresh = 6 T. whole, dried mushrooms
Mustard, dry	1 t.	= 1 T. prepared mustard
Noodles, 1-inch pieces	1 lb.	= 6 to 8 c. uncooked = 8 c. cooked
Okra	1 lb.	= 2¼ c. cooked
Onion, fresh	1 small	= rehydrate 1 T. instant minced onion
Onion powder	1 T.	= 1 medium onion, chopped = 4 T. fresh chopped onion
Onions	1 lb.	= 3 large onions = 2 to 2½ c. chopped
Orange	1 medium	= ⅓ to ½ c. juice = 2 to 3 T. grated peel
Orange peel, dried	1 T. 2 t.	= 2 to 3 T. grated fresh orange peel = grated peel of 1 medium orange = 1 t. orange extract
Parsley, dried	1 t.	= 3 t. 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 $\frac{1}{3}$ c. sliced
Peas, green, in pod	1 lb.	= 1 c. shelled = 1 c. cooked
Peas, black-eyed	1 lb.	= 2 $\frac{1}{3}$ c. cooked
Pecans	1 lb.	= 3 $\frac{1}{2}$ c. nut meats
Peppers, green bell	1 T. dried	= 3 T. fresh green pepper, chopped
Peppers, red bell	1 T. dried	= 3 T. fresh red bell pepper, chopped = 2 T. chopped pimiento
Peppermint, dried	1 T.	= $\frac{1}{4}$ c. chopped fresh mint
Pimiento	2 T. dried	= 1 T. dried red bell peppers, rehydrated = 3 T. 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 $\frac{1}{4}$ c. = 1 $\frac{3}{4}$ c.
Prunes	1 lb.	= 2 $\frac{1}{4}$ c. pitted
Pumpkin, mashed, cooked	1 lb.	= 1 c.
Pumpkin pie spice	1 t.	= $\frac{1}{2}$ t. cinnamon, $\frac{1}{4}$ t. ginger, $\frac{1}{8}$ t. allspice, and $\frac{1}{8}$ t. nutmeg
Radishes	6 oz.	= 1 $\frac{1}{4}$ c. sliced
Raisins	1 lb.	= 2 $\frac{3}{4}$ c.
Rennet	1 tablet	= 1 T. 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 c. cooked
Rutabaga	1 lb.	= 2 $\frac{1}{2}$ 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 T. lard ( $\frac{7}{8}$ c.) = 1 $\frac{1}{8}$ c. butter (decrease salt called for in recipe by $\frac{1}{2}$ t.)
Sour cream, cultured	1 c.	= $\frac{3}{4}$ c. sour milk or buttermilk and $\frac{1}{3}$ c. butter or margarine = blend until smooth: $\frac{1}{3}$ c. buttermilk, 1 T. lemon juice and 1 c. cottage cheese = 1 c. plain yogurt = $\frac{3}{4}$ c. milk, $\frac{3}{4}$ t. lemon juice and $\frac{1}{3}$ c. butter or margarine
Spaghetti	1 lb.	= 4 to 5 c. 2-inch pieces = 9 c. cooked
Spearmint, dried	1 T.	= $\frac{1}{4}$ c. chopped fresh mint
Spinach	1 lb.	= 4 c. fresh = 1 $\frac{1}{2}$ c. cooked
Squash, summer	1 lb.	= 1 $\frac{2}{3}$ 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 $\frac{1}{4}$ c. firmly packed
Sugar, granulated	1 lb.	= 2 $\frac{1}{4}$ c.

Sugar, granulated	1 t.	= 1/8 t. noncaloric sweetener solution or follow manufacturer's directions
Sugar, granulated	1 c.	= 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 t. soda)
Sugar, powdered	1 lb.	= 2 3/4 c.
Sweet potatoes	1 lb.	= 3 medium
Tapioca, granular	1 t.	= 2 T. pearl tapioca
Tomatoes, fresh	1 lb.	= 3 to 4 small
juice	2 c. chopped 1 c.	= 1 16-oz. can (may need to drain) = 1/2 c. tomato sauce and 1/2 c. water
Turnips	1 lb.	= 3 medium turnips = 2 c. cooked
Worcestershire sauce	1 t.	= 1 t. bottled steak sauce
Yeast, active dry	1 T. (scant) 2 1/4 t.	= 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

<b>This Much</b>	<b>Equals This Much</b>	<b>This Much</b>	<b>Equals This Much</b>
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	1/6 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	1/6 teaspoon

c. = cup, lb. = pound, oz. = ounce, fl. oz. = fluid ounce, qt. = quart, T. = tablespoon, t. = teaspoon



HE-585

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6M, Reprinted June 2006, HE-585