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# Ingredient Substitutions 

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## Ingredient Substitutions

Have you ever been all set to prepare a food and suddenly discovered you were missing a certain ingredient? Sometimes it is inconvenient to go to the store to purchase the necessary ingredient. It may be more convenient to try a substitute from supplies available in your kitchen.

The following chart gives substitutes that may be used to achieve a product that is similar to the original. There are, however, a number of factors to consider when substituting ingredients. Each ingredient in a recipe has a specific function. Substitution of one ingredient for another may alter the taste, color, moisture content or texture of the product. For this reason, it is suggested that ingredient substitution be used in unexpected situations only.

If you don't have the food listed in the "ingredient" column, try one of the alternatives listed in the "substitutes" column.

| Ingredient | Amount | Substitutes |
| :--- | :--- | :--- |
| Allspice | 1 teaspoon | $\bullet 1 / 2$ teaspoon cinnamon and $1 / 2$ teaspoon |
|  |  | ground cloves |


| Ingredient | Amount | Substitutes |
| :---: | :---: | :---: |
| Catsup | 1 cup | - 1 cup tomato sauce, $1 / 2$ cup sugar and 2 tablespoons vinegar (for use in cooking) |
| Chicken stock base, instant | $11 / 2$ teaspoons | - 1 chicken bouillon cube |
| Chicken stock base, instant | 1 tablespoon dissolved in 1 cup water | - 1 cup canned or homemade chicken broth or stock |
| Chili sauce | 1 cup | - 1 cup tomato sauce, $1 / 4$ cup brown sugar, 2 tablespoons vinegar, $1 / 4$ teaspoon cinnamon, dash of ground cloves and dash of allspice |
| Chives, finely chopped | 2 teaspoons | - 2 teaspoons finely chopped green onion tops |
| Chocolate chips, semisweet | 1 ounce | - 1 ounce sweet cooking chocolate |
| Chocolate, semisweet | 12/3 ounces | - 1 ounce unsweetened chocolate plus 4 teaspoons sugar |
| Chocolate, semisweet pieces, melted | 6 ounce package | - 2 squares unsweetened chocolate plus 2 tablespoons shortening and $1 / 2$ cup sugar |
| Chocolate, unsweetened | 1 ounce or square | - 3 tablespoons cocoa plus 1 tablespoon butter or margarine <br> - 3 tablespoons carob powder plus 2 tablespoons water |
| Cocoa | $1 / 4$ cup or 4 tablespoons | - 1 ounce (square) chocolate (decrease fat called for in recipe by $1 / 2$ tablespoon) |
| Coconut | 1 tablespoon grated, dry | - $11 / 2$ tablespoons fresh, grated |
| Coconut Cream | 1 cup | - 1 cup cream |
| Coconut Milk | 1 cup | - 1 cup milk |
| Corn Syrup | 1 cup | - 1 cup sugar plus $1 / 4$ cup liquid (use whatever liquid is called for in the recipe) <br> - 1 cup honey |
| Cornstarch (for thickening) | 1 tablespoon | - 2 tablespoons all-purpose flour <br> - 4 to 6 teaspoons quick-cooking tapioca |
| Cracker crumbs | $3 / 4$ cup | - 1 cup bread crumbs |
| Cream cheese |  | - Part skim milk ricotta cheese or lowfat cottage cheese beaten until smooth |
| Cream, half-and-half | 1 cup | - $7 / 8$ cup whole milk plus $1 / 2$ tablespoon butter or margarine <br> - 3 tablespoons oil plus milk to equal 1 cup <br> - 1 cup evaporated milk |
| Cream, heavy (36 to 40\% fat) | 1 cup | - $3 / 4$ cup milk plus $1 / 3$ cup butter or margarine (for use in cooking and baking) <br> - $2 / 3$ cup buttermilk plus $1 / 3$ cup oil <br> - Evaporated skim milk or equal parts of part-skim milk ricotta cheese and nonfat yogurt beaten until smooth (this mixture cannot be heated because of separation) |


| Ingredient | Amount | Substitutes |
| :--- | :--- | :--- |
| Cream, light <br> (18 to $20 \%$ fat) | 1 cup | - 1 cup undiluted evaporated milk |
|  |  | - 14 tablespoons milk plus 3 tablespoons butter |
| or margarine |  |  |


| Ingredient | Amount | Substitutes |
| :--- | :--- | :--- |
| Egg white | 1 white $(2$ tablespoons) | $\bullet 2$ tablespoons frozen egg white, thawed |
|  |  | $\bullet 2$ teaspoons sifted dry egg white powder plus |
|  |  | 2 tablespoons lukewarm water |
| Egg yolk |  |  |
|  |  |  |
|  |  |  |


| Ingredient | Amount | Substitutes |
| :---: | :---: | :---: |
| Flour, all-purpose - continued | 1 cup sifted | - $1 / 3$ cup cornmeal or soybean flour plus <br> $2 / 3$ cup all-purpose flour <br> - $1 / 2$ cup cornmeal, bran, rice flour, rye flour or whole wheat flour plus $1 / 2$ cup all-purpose flour <br> - Substitute whole wheat flour for $1 / 4$ to $1 / 2$ of white flour called for in a recipe <br> - $1 / 4$ cup soybean flour plus $3 / 4$ cup all-purpose flour <br> - $1 / 3$ cup wheat germ plus $2 / 3$ cup all-purpose flour |
| Flour, cake | 1 cup sifted | - 1 cup minus 2 tablespoons sifted all-purpose flour |
| Flour, pastry | 1 cup | - $7 / 8$ cup all-purpose flour |
| Flour, self-rising | 1 cup | - 1 cup minus 2 teaspoons all-purpose flour plus $11 / 2$ teaspoons baking powder and $1 / 2$ teaspoon salt |
| Flour, whole wheat | 1 cup | - 1 cup white wheat flour <br> - 1 cup graham flour |
| Garlic | 1 clove, small | - $1 / 8$ teaspoon garlic powder or $1 / 4$ teaspoon instant minced garlic |
| Garlic salt | $3 / 4$ teaspoon | - 1 medium size clove or $1 / 2$ teaspoon minced fresh |
| Gelatine, flavored | 3 -ounce package | - 1 tablespoon plain gelatine plus 2 cups fruit juice |
| Ginger | $1 / 8$ teaspoon, powdered | - 1 tablespoon candied ginger rinsed in water to remove sugar, finely cut <br> - 1 tablespoon fresh ginger, grated |
| Herbs, dried | 1 teaspoon | - 1 tablespoon fresh, finely cut |
| Herbs, fresh | 1 tablespoon, finely cut | - 1 teaspoon dried herbs <br> - $1 / 2$ teaspoon ground herbs |
| Honey | 1 cup | - $11 / 4$ cups sugar plus $1 / 4$ cup liquid (use liquid called for in recipe) |
| Horseradish | 1 tablespoon, fresh | - 2 tablespoons bottled |
| Lemon | 1 teaspoon juice <br> 1 medium | - $1 / 2$ teaspoon vinegar <br> - 2 to 3 tablespoons lemon juice and 1 to 2 teaspoons rind |
| Lemon peel, dried | 1 teaspoon | - 1 to 2 teaspoons grated fresh lemon peel <br> - grated peel of 1 medium size lemon <br> - $1 / 2$ teaspoon lemon extract |
| Macaroni (4 cups cooked) | 2 cups, uncooked | - 2 cups spaghetti, uncooked, (2 inch pieces) <br> - 4 cups noodles, uncooked |


| Ingredient | Amount | Substitutes |
| :---: | :---: | :---: |
| Maple sugar | $1 / 2$ cup | - 1 cup maple syrup |
| Maple sugar (grated and packed) | 1 tablespoon | - 1 tablespoon white granulated sugar |
| Marshmallows, miniature | 1 cup | - 10 large |
| Mayonnaise (for use in salads and salad dressings) | 1 cup | - $1 / 2$ cup yogurt and $1 / 2$ cup mayonnaise or salad dressing <br> - 1 cup salad dressing <br> - 1 cup sour cream <br> - 1 cup yogurt <br> - 1 cup cottage cheese pureed in a blender |
| Milk, buttermilk | 1 cup | - 1 cup plain yogurt |
| Milk, buttermilk or sour | 1 cup | - 1 cup minus 1 tablespoon sweet milk plus 1 tablespoon lemon juice or vinegar (allow to stand 5 to 10 minutes) <br> - 1 cup sweet milk and $13 / 4$ teaspoons cream of tartar |
| Milk, evaporated (whole or skim) | If recipe calls for $1 / 2$ cup plus $1 / 2$ cup water | - 1 cup liquid whole milk |
| Milk, evaporated | 1 can (about 12 ounces) | - Whip until smooth: 1 cup nonfat dry milk $13 / 4$ cups warm water Keep refrigerated |
| Milk, skim | 1 cup | - 4 to 5 tablespoons nonfat dry milk powder and enough water to make one cup, or follow manufacturer's directions |
|  | $1 / 4$ cup | - 4 teaspoons nonfat dry milk powder plus water to make $1 / 4$ cup, or follow manufacturer's directions |
|  | $1 / 3$ cup | - 2 tablespoons nonfat dry milk powder plus water to make $1 / 3$ cup, or follow manufacturer's directions |
| Milk, sweetened condensed | 1 can (about $11 / 3$ cup) | - Heat the following ingredients until sugar and butter are dissolved: <br> $1 / 3$ cup and 2 tablespoons evaporated milk <br> 1 cup sugar <br> 3 tablespoons butter or margarine |
|  | 1 cup | - Heat the following ingredients until sugar and butter are dissolved: <br> $1 / 3$ cup evaporated milk <br> $3 / 4$ cup sugar <br> 2 tablespoons butter or margarine |
|  |  | - Add 1 cup plus 2 tablespoons dry milk powder to $1 / 2$ cup warm water. Mix well. Add $3 / 4$ cup sugar and stir until smooth. |


| Ingredient | Amount | Substitutes |
| :---: | :---: | :---: |
| Milk, sweetened condensed | To make about $1 \frac{1}{4}$ cups in blender | - Combine 1 cup instant nonfat dry milk, $2 / 3$ cup sugar, $1 / 3$ cup boiling water and 3 tablespoons margarine. Blend until smooth. To thicken, let set in refrigerator for 24 hours. |
| Milk, whole | 1 cup | - 1 cup reconstituted nonfat dry milk plus $21 / 2$ teaspoons butter or margarlne <br> - $1 / 2$ cup evaporated milk plus $1 / 2$ cup water <br> - 1 cup buttermilk plus $1 / 2$ teaspoon baking soda (for use in baking, decrease baking powder by 2 teaspoons) <br> - 4 tablespoons whole dry milk plus 1 cup water or follow manufacturer's directions <br> - 1 cup fruit juice or 1 cup potato water (in baking) <br> - $1 / 4$ cup nonfat dry milk, $7 / 8$ cup water and 2 teaspoons butter or margarine <br> - 1 cup water plus $1 \frac{1}{2}$ teaspoons butter (in baking) |
| Molasses | 1 cup | - $3 / 4$ cup sugar plus 2 teaspoons baking powder (increase liquid called for in recipe by 5 tablespoons and decrease baking soda by $1 / 2$ teaspoon) <br> - $3 / 4$ cup sugar plus $11 / 4$ teaspoons cream of tartar (increase liquid called for in recipe by 5 tablespoons) |
| Mushrooms | 1 pound fresh | - 3 ounces dried mushrooms <br> - 6- or 8-ounce can |
| Mushrooms, powdered | 1 tablespoon | - 3 tablespoons whole dried mushrooms <br> - 4 ounces fresh <br> - 2 ounces canned |
| Mustard, dry | 1 teaspoon | - 1 tablespoon prepared mustard <br> - $1 / 2$ teaspoon mustard seeds |
| Oil, flavor-based (example: oil of peppermint) |  | - See Flavor-Based Oil |
| Onion | 1 small | - $1 / 4$ cup chopped, fresh onion <br> - $11 / 3$ teaspoons onion salt <br> - 1 to 2 tablespoons minced onion <br> - 1 teaspoon onion powder |


| Ingredient | Amount | Substitutes |
| :---: | :---: | :---: |
| Orange | 1 medium | - 6 to 8 tablespoons juice |
| Orange peel, dried | 1 tablespoon <br> 2 teaspoons | - 2 to 3 tablespoons grated fresh orange peel <br> - Grated peel of 1 medium-size orange <br> - 1 teaspoon orange extract |
| Orange peel, fresh | 1 medium | - 2 to 3 tablespoons grated fresh orange peel |
| Parsley, dried | 1 teaspoon | - 3 teaspoons fresh parsley, chopped |
| Peppers, green bell | 1 tablespoon, dried | - 3 teaspoons fresh parsley, chopped |
| Peppers, red bell | 1 tablespoon, dried | - 3 tablespoons fresh red bell pepper, chopped <br> - 2 tablespoons pimiento, chopped |
| Peppermint extract | 1 tablespoon | - $1 / 4$ cup fresh mint, chopped <br> - See also Extracts |
| Pimiento | 2 tablespoons chopped | - 1 tablespoon dried red bell peppers, rehydrated <br> - 3 tablespoons fresh red bell pepper, chopped |
| Pumpkin pie spice | 1 teaspoon | - $1 / 2$ teaspoon cinnamon, $1 / 4$ teaspoon ginger, $1 / 8$ teaspoon allspice and $1 / 8$ teaspoon nutmeg |
| Rennet | 1 tablet | - 1 tablespoon liquid rennet |
| Rice | 1 cup regular, uncooked (3 cups cooked) <br> 1 cup cooked | - 1 cup uncooked converted rice <br> - 1 cup uncooked brown rice <br> - 1 cup uncooked wild rice <br> - 1 cup cooked bulgur wheat <br> - 1 cup cooked pearl barley |
| Rum | $1 / 4$ cup | - 1 tablespoon rum extract plus 3 tablespoons liquid (use liquid called for in recipe or water) |
| Shortening, melted | 1 cup | - 1 cup cooking oil (cooking oil should not be substituted if recipe does not call for melted shortening) |
| Shortening, solid (used in baking) | 1 cup | - 1 cup minus 2 tablespoons lard <br> - $11 / 8$ cups butter or margarine (decrease salt called for in recipe by $1 / 2$ teaspoon) |
| Shrimp, fresh | 1 cup cleaned, cooked | - $3 / 4$ pound raw in shell, clean and cook <br> - 7-ounce package frozen, peeled shrimp, cooked <br> - $41 / 2$ - or 5 -ounce can of shrimp |


| Ingredient | Amount | Substitutes |
| :---: | :---: | :---: |
| Sour cream, cultured | 1 cup | - $7 / 8$ cup sour milk or buttermilk plus $1 / 3$ cup butter or margarine <br> - Blend until smooth: $1 / 3$ cup buttermilk, 1 tablespoon lemon juice and 1 cup cottage cheese <br> - $11 / 8$ cups non-fat dry milk powder, $1 / 2$ cup warm water, and 1 tablespoon vinegar (mixture will thicken in refrigerator in a few hours) <br> - 1 cup evaporated milk at $70^{\circ} \mathrm{F}$ plus 1 tablespoon vinegar (allow to stand until it clabbers) <br> - 1 cup plain yogurt (in cooking add a tablespoon of cornstarch to each cup to prevent separating) <br> - $3 / 4$ cup milk, $3 / 4$ teaspoon lemon juice and $1 / 3$ cup butter or margarine <br> - $3 / 4$ cup buttermilk plus $1 / 4$ cup oil <br> - 1 cup cottage cheese and 2 or 3 teaspoons of lemon juice, pureed in blender |
| Spearmint, extract | 1 tablespoon | - $1 / 4$ cup fresh mint, chopped <br> - See also Extracts |
| Sugar, brown | 1 cup, firmly packed | - 1 cup granular sugar <br> - 1 cup granulated sugar plus $1 / 4$ cup molasses |
| Sugar, confectioners' or powdered | 1 cup | - 3/4 cup granulated sugar |
| Sugar, white | 1 teaspoon 1 cup | - $1 / 2$ to $3 / 4$ teaspoon honey or molasses <br> - 2 cups corn syrup (reduce liquid called for in recipe by $1 / 4$ cup. Never replace more than $1 / 2$ of sugar called for in recipe with corn syrup.) <br> - 1 cup brown sugar, firmly packed <br> - $13 / 4$ cups confectioners' sugar (for uses other than baking) <br> - 1 cup molasses plus $1 / 2$ teaspoon soda (omit baking powder or use very little. Substitute molasses for no more than half the sugar. Reduce liquid in recipe by $1 / 4$ cup per cup of molasses.) <br> - $3 / 4$ cup maple syrup (Reduce liquid called for in recipe by 3 tablespoons.) <br> - 1 cup honey (decrease liquid called for in recipe by $1 / 4$ cup. In baked goods, add $1 / 2$ teaspoon of baking soda for each cup of honey substituted and lower baking temperature 25 degrees. In cookie recipes using eggs and no additional liquid, increase the flour by |


| Ingredient | Amount | Substitutes |
| :---: | :---: | :---: |
| Sugar, white - continued |  | about 2 tablespoons per cup of honey. Chill before shaping and baking. Half of the sugar in cakes, cookies and brownies can be replaced with honey. Two-thirds of the sugar can be replaced in fruit bars, but replace no more than a third of the sugar in ginger snaps with honey. When making cakes or cookies, first mix honey with the fat or the liquid, then mix with other ingredients. If this is not done, a soggy layer may form on top of the baked product.) |
| Sugar, white |  | - Sweeteners: |
|  |  | - Sugar Twin and Sprinkle Sweet: measure like sugar. Substitute 1 teaspoon sweetener for 1 teaspoon sugar, 1 cup sweetener for 1 cup sugar. <br> - Equal: 1 packet = 2 teaspoons sugar <br> - Sweet 10: 10 drops = 1 teaspoon sugar 1 tablespoon = $1 / 2$ cup sugar |
| Tapioca, granular | 1 tablespoon | - 2 tablespoons pearl tapioca |
|  | 2 teaspoons | - 1 tablespoon flour |
| Tomato juice | 1 cup | - $1 / 2$ cup tomato sauce plus $1 / 2$ cup water |
| Tomatoes, fresh | 2 cups, chopped | -16-ounce can |
| Tomato sauce | 15-ounce can | - 6-ounce can tomato paste plus 1 cup water |
| Tomatoes, chopped | 16-ounce can | - 3 fresh medium tomatoes |
|  |  | -16-ounce can stewed tomatoes |
| Tomato soup | 103/4-ounce can | - 1 cup tomato sauce plus $1 / 4$ cup water |
| Vanilla extract | 1 teaspoon | - 1-inch vanilla bean split and simmered in liquid of recipe |
| Wine | 1 cup | - 13 tablespoons water, 3 tablespoons lemon juice and 1 tablespoon sugar |
| Worcestershire sauce | 1 teaspoon | - 1 teaspoon bottled steak sauce |
| Yeast, active dry | 1 tablespoon | - 1 cake ( $6 / 10$ ounce), compressed (2/3 ounce) |
| Yogurt, plain | 1 cup | - 1 packaged ( $1 / 4$ ounce) active dry yeast <br> - 1 cup buttermilk <br> - 1 cup cottage cheese blended until smooth <br> - 1 cup sour cream |

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## Measuring Up

These commonly used equivalent measures will simplify your recipe preparation.

- General

3 teaspoons = 1 tablespoon
4 tablespoons $=1 / 4$ cup
5 tablespoons +1 teaspoon $=1 / 3$ cup
16 tablespoons = 1 cup
2 cups $=1$ pint
2 pints $=1$ quart

- Butter
$1 / 2$ ounce ( $1 / 8$ stick) = 1 tablespoon
1 ounce ( $1 / 4$ stick) $=2$ tablespoons
2 ounces ( $1 / 2$ stick) $=4$ tablespoons
4 ounces ( 1 stick) = $1 / 2$ cup
16 ounces ( 4 sticks) $=2$ cups


## - Chocolate

12-ounce morsels = 1 cup melted chocolate 12-ounce morsels = 2 cups whole morsels

- Cream

1 cup heavy cream = 2 cups whipped cream

## - Eggs

8 -10 whites, large $=1$ cup egg whites
$12-14$ yolks, large = 1 cup egg yolks


- Flour

1 pound = 4 cups

- Fruit

1 medium lemon $=3$ tablespoons juice +1 tablespoon grated rind
1 medium orange $=1 / 3$ to $1 / 2$ cup juice +2 tablespoons grated rind
1 pound apples $=3$ medium whole or 3 cups sliced
1 pound bananas = 3 medium whole or $11 / 2$ cups mashed

## - Nutmeats

$41 / 2$ ounces nuts, chopped = 1 cup

- Popcorn
$1 / 4$ cup kernels = 8 cups popped


## - Sugar

1 pound brown sugar $=21 / 4$ cups
1 pound confectioners' $=41 / 2$ cups sifted

## Original Authors

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