

## Flour Basics

A high percentage of protein means a harder (stronger) flour best suited to chewy, crusty breads and other yeast-risen products. Less protein means a softer flour, best for tender baked goods, like pie crusts, cakes, cookies, and biscuits.

**Oat Flour**-Oats are naturally gluten free, but may become cross-contaminated with gluten. Make sure you purchase oats or oat flour that is certified gluten-free if you have a sensitivity or allergy. Oat flour is very light and has a slightly nutty flavor. Rather than buy oat flour, you can make your own at home in a blender.

**Cake flour** is used to make a white cake where a delicate tender crumb is desired. Cake flour has a 6-8% protein content and is made from soft wheat flour. It is chlorinated to further break down the strength of the gluten and is smooth and velvety in texture. To make your own - one cup sifted cake flour can be substituted with 3/4 cup (84 grams) sifted bleached all-purpose flour plus 2 tablespoons (15 grams) cornstarch (cornstarch further reducing the gluten/protein content).

**Pastry flour** is similar to cake flour, although it has not been chlorinated, with an 8-10% protein content and is made from soft wheat flour. To make two cups of pastry flour, combine 1 1/3 cups (185 grams) all-purpose flour with 2/3 cup (90 grams) cake flour. Good for making pastry, pies and cookies. Whole wheat pastry flour: This flour is made from the same type of red wheat as whole wheat flour, but has a slightly lower gluten content and protein level. It is similar to an all-purpose flour, but is less processed

**Self-Rising flour** has 8-9% protein and contains flour plus baking powder and salt. If the flour is stored too long the baking powder will lose some of its strength and your baked goods will not rise properly. If you want to make your own add 1 1/2 teaspoons baking powder and 1/4 teaspoon salt per cup (130 grams) of all-purpose flour.

**All-purpose flour** has a 8-12% protein content and is made from a blend of hard and soft wheat flours. It can be bleached or unbleached which are interchangeable. However, Southern brands of bleached all-purpose flour have a lower protein content (8%) as they are made from a soft winter wheat.

**Bread flour** is used to make a chewy bread and has a 12-14% protein content and is made from hard wheat flour. The high gluten content causes the bread to rise and gives it shape and structure. Comes in white, whole wheat, organic, bleached and unbleached. To make it yourself, just add 1 tablespoon of vital wheat gluten/gluten flour per cup of all-purpose flour to your recipe.

**Whole wheat flour** has 14% protein. When using it for bread add 1 teaspoon wheat gluten per cup of wheat flour. When completely substituting whole-wheat for white, use 7/8 cup whole-wheat for one cup of white flour. This flour has fewer calories and carbohydrates than white flour, and it contains five times the fiber, twice the calcium, and 25 percent more protein than white flour. Whole wheat flour is made from red wheat, which gives it a tannish color.

**Almond Flour**-Like other nut flours, almond flour is high in fat and protein. It is made from blanched ground almonds, similar to almond meal but more of a flour consistency. Nut flours are often a substitute for powdered milk.

**Chickpea Flour**-Chickpea flour is also known as garbanzo flour and is made from ground chickpeas. It can have an egg-like flavor, and is high in protein. It is a good thickener for stews and gravies.

**Arrowroot Flour**-This flour is made from the rootstock of the arrowroot plant. This flour is almost completely carbohydrates. It is a great clear thickener versus cornstarch, which can make things cloudy.

**Proper measuring** of your flour is important, as too much flour will result in a tough and/or heavy baked good. When measuring flour, spoon your flour into a measuring cup and then level off the cup with a knife. Do not pack it down. Flour gets compacted in the bag during shipping, so scooping your flour right out of the bag using your measuring cup will result in too much flour.

There are 20 cups in a five-pound bag (4 oz of flour per cup).

To make a bag of your own bread flour that is 20T of wheat gluten or 1 1/4c vital wheat gluten plus the 5 lbs all purpose flour.

To get softer bread, use 1/3 c cup of water per cup of flour reserved from boiling potatoes or rice as part of the water needed for the bread recipe. Likewise, put bread/rolls warm into a plastic bag to make them softer. When cool put in fridge as will mold faster.

**Yeast**- One family exclusively bakes their bread and uses 4 pounds of yeast a year, another uses a pound. There is substantial savings by buying it in bulk. Just fill a small jar to keep in the refrigerator and freeze the remaining yeast. Refill the ready use refrigerator jar as needed. You will save over 75% on the cost of yeast.

**Salt**- takes at least 1/4-teaspoon of salt per pound of bread to regulate it properly. Liquids used in a bread machine should be room temperature or a little bit warmer.

**Vital wheat gluten** helps improve the rise and texture of bread. Generally, if you are using white bread flour you don't need to add any. However, all-purpose or whole grain flours need Vital Wheat Gluten-add 1 teaspoon per cup of flour

**Ascorbic Acid** creates an acidic environment for the yeast which helps it work better. It also acts as a preservative & deters mold and bacterial growth. If you can't find pure ascorbic acid crystals you can use Fruit Fresh (canning isle) or a crushed/powdered vitamin C tablet. Use: 1/8 teaspoon per loaf.

**Ginger** is a yeast booster it gives it a "quick-start", and keeps it working. Because of its astringent properties it also helps keep the bread fresher longer and it deters mold and bacterial growth. It is best to use powdered ginger in your bread. You don't have to worry you won't taste it in the amount used. Use: 1/4 teaspoon per loaf

**Vinegar** Add a spoonful of vinegar along with the liquid ingredients-you will not taste the vinegar in the finished bread but the acid in it will keep the bread fresh for a little while longer after it is baked.

**Bread Machines** Bread seems to rise more evenly if you will pre-mix in a bowl your flour, gluten, and salt. Then place in the machine in the order called for by the machine, typically liquids, flour then create a "well" to deposit the yeast in. You can top the yeast with a teaspoon of sugar to help the yeast.

<http://www.joyofbaking.com/flour.html>

<http://www.breadmachinedigest.com/tips/dough-enhancers-and-how-to-use-them.php>