

COOKING ADJUNCTS

BAKING POWDER

Baking powder is a combination of an acid and an alkali with starch added to keep the other two ingredients stable and dry. The powder reacts with liquid by foaming and the resulting bubbles of carbon dioxide can aerate and raise dough. Almost all baking powder now on the market is double acting, meaning it has one acid that bubbles at room temperature and another acid which only reacts at oven temperatures. Unless a recipe specifies otherwise, this is the type to use.

Don't expose baking powder to steam, humid air, wet spoons, or other moisture. Store in a tightly lidded container for no more than a year. Even when kept bone dry it will eventually loses its potency. To test its strength, measure 1 tsp powder into 1/3 cup hot water. The mixture should fizz and bubble furiously. If it doesn't, throw it out.

For those folks concerned with aluminum in the diet, the Rumford brand has none and there may be others.

BAKING SODA

This gritty powder is sodium bicarbonate also known as sodium acid bicarbonate (NaHCO_3), a mild alkali. When combined with an acid ingredient such as buttermilk it is used in baking to leaven quick breads and other baked foods working in the same manner as baking powder. It can also be used to make hominy. When combined with an acid ingredient, the bicarbonate reacts to give off carbon dioxide bubbles which causes the baked good to rise. If kept well sealed in an air and moisture-proof container its storage life is indefinite. If kept in the cardboard box it usually comes in, it will keep for about eighteen months. Do keep in mind that baking soda is a wonderful odor absorber. If you don't want your baked goods tasting of whatever smells it absorbed then keeping it in an airtight container is a good idea.

HERBS AND SPICES

It is difficult to give exact instructions on how best to store culinary herbs and spices because there are dozens of different seeds, leaves, roots, barks, etc., we call an herb or a spice. There are, however, some general rules that may be followed to best preserve their flavors. All spices, particularly dried, are especially sensitive to heat, air, moisture, and light. Room temperature is satisfactory for storage but

refrigeration or freezing is even better. Whatever you do they should be kept away from heat sources. It is common for the household spice cabinet or shelf to be located over the stove, but this is really about the worst possible place to keep herbs and spices even if it is convenient. Dark opaque glass is best for storage, but failing that, keeping a tightly sealed glass container in a dark place is next best. The cellophane packets some products come in won't do. Tightly sealed metal containers will work as well. Even dense plastic will do, but glass is best.

Where possible, buy spices whole. Whole nutmegs will keep their flavor far longer than ground nutmeg, the same for other seeds and roots. You'll have to use a grater, grinder or whatever, but the difference in flavor is worth it.

If you buy spices in bulk containers (which is certainly cheaper) consider transferring some into smaller containers and keeping the larger one tightly sealed in a cool, dark place. This will prevent unwanted light and air from continually getting in and playing havoc. My large jars of reserve spices are kept in vacuum sealed jars with smaller jars of ready spices kept in the kitchen.

There are many mail order or online suppliers of bulk herbs and spices. My personal favorite is Penzey's (<http://www.penzeys.com>). Their products have been consistently excellent with good prices. It's worth investigating some of these companies as they can really take the sting out of purchasing large quantities.

SALT

Storage life for salt is indefinite. So long as you do not let it become contaminated with dirt or whatever, it will never go bad. Over time, iodized salt may turn yellow, but this is harmless and can still be used. Salt is rather hygroscopic and will adsorb moisture from the air if not sealed in an airtight container. If it does cake up, it can be dried in the oven and then pulverized again with no harm done.

All salt, however, is not the same. Salt comes in a number of different varieties, and very little of what is produced in the U.S. is intended for use in food. The rest of it, about 98%, has other uses. Therefore, it is important to be certain the salt you have is intended for human consumption. Once you are satisfied it is, you should then determine its appropriateness for the tasks to which you might want to set it to.

Below is a list of some of the available salts.

TABLE SALT: This is by far the most widely known type of salt. It comes in two varieties; iodized and non-iodized. There is an ingredient added to adsorb moisture so the salt will stay free flowing in damp

weather. This non-caking agent does not dissolve in water and can cause cloudiness in solutions if sufficiently large quantities are used. In canning this won't cause a problem since little per jar is used. For pickling, though, it would be noticeable. If you are storing salt for this purpose, you should be sure to choose plain pickling salt, or other food grade pure salt such as kosher salt. In the iodized varieties, the iodine can cause discoloration or darkening of pickled foods. For folks in areas that are historically iodine deficient a store of iodized salt for table consumption should be kept.

CANNING SALT: This is pure salt and nothing but salt. It can usually be found in the canning supplies section of most grocery stores. This is the preferred salt for most food preservation or storage uses. It is generally about the same grain size as table salt.

KOSHER SALT: This salt is not really, in itself, kosher, but is used in "kashering" meat to make the flesh kosher for eating. This involves first soaking the meat then rubbing it with the salt to draw out the blood which is not-kosher and is subsequently washed off along with the salt. The cleansed meat is then kosher. What makes it of interest for food storage and preservation is that it is generally pure salt suitable for canning, pickling and meat curing. It is of a larger grain size than table or canning salt, and usually rolled to flake the grains for easier dissolving. Frequently it is slightly cheaper than canning salt and usually easier to find in urban/suburban areas.

NOTE: Not all brands of kosher salt are exactly alike. Diamond Crystal Kosher Salt is the only brand that I'm aware of that is not flaked, but still in its unaltered crystal form. The Morton brand of Coarse Kosher Salt has "yellow prussiate of soda" added as an anti-caking agent but unlike other anti-caking agents it does not cause cloudiness in solution. Morton even gives a kosher dill pickle recipe on the box.

Whether flaked or in its unaltered crystal form, kosher salt takes up more volume for an equivalent amount of mass than does canning salt. If it is important to get a precise amount of salt in your pickling or curing recipe you may want to weigh the salt to get the correct amount.

SEA SALT: This type of salt comes in about as many different varieties as coffee and from many different places around the world. The "gourmet" versions can be rather expensive. In general, the types sold in grocery stores, natural food markets and gourmet shops have been purified enough to use in food. It's not suitable for food preservation, though, because the mineral content it contains (other than the sodium chloride) may cause discoloration of the food.

ROCK or ICE CREAM SALT: This salt comes in large chunky crystals and is intended primarily for use in home ice cream churns to lower the temperature of the ice filled water in which the churn sits. It's also

sometimes used in icing down beer kegs or watermelons. It is used in food preservation by some, but none of the brands I have been able to find label it as food grade nor do they specifically mention its use in foods so I would not use it for this purpose.

SOLAR SALT: This is also sometimes confusingly called “sea salt”. It is not, however, the same thing as the sea salt found in food stores. Most importantly, it is not food grade. It’s main purpose is for use in water softeners. The reason it is called “solar” and sometimes “sea salt” is that it is produced by evaporation of sea water in large ponds in various arid areas of the world. This salt type is not purified and still contains the desiccated remains of whatever aquatic life might have been trapped in it. Those organic remains might react with the proteins in the foods you are attempting to preserve and cause it to spoil.

HALITE: For those of us fortunate enough to live where it is warm, halite is the salt that is used on roads to melt snow and ice. It, too, is not food grade and should not be used in food preservation. This form of salt is also frequently called rock salt, like the rock salt above, but neither are suitable for food use.

SALT SUBSTITUTES: These are other kinds of metal salts such as potassium chloride used to substitute for the ordinary sodium chloride (NaCl) salt we are familiar with. They have their uses, but should not be used in foods undergoing a heated preservation processing, as they can cause the product to taste bad. Even the heat from normal cooking is sometimes sufficient to cause this.

VINEGAR

There is vinegar and then there is vinegar and it is not all alike. The active ingredient in all vinegars is acetic acid, but how the sour stuff was made can vary widely. The most common vinegar is white distilled which is actually diluted distilled acetic acid and not true vinegar at all. It keeps pretty much indefinitely if tightly sealed in a plastic or glass bottle with a plastic cap. The enamel coated metal caps always seem to get eaten by the acid over time. It is usually about 5-6% acetic acid and for pickling it is the type most often called for.

The next most common is apple cider vinegar which is available in two varieties. A cider flavored distilled acetic acid type and a true cider vinegar fermented from hard cider. Either will store indefinitely at room temperature until a sediment begins to appear on the bottom. Non-distilled vinegar will sometimes develop a cloudy substance. This is called a mother of vinegar and it is harmless. As long as the liquid does not begin to smell foul it can be filtered out through cheesecloth or a coffee filter and rebottled in

a clean container. The mother can even be used to make more vinegar. If it begins to smell bad, however, it's gone over and should be tossed out.

The more exotic wine, balsamic, malt, rice and other vinegars can be stored like cider vinegar. Age and exposure to light and air, however, eventually begin to take their toll on their delicate flavors. Tightly capped in a cool, dark cabinet or refrigerator is best for their storage.

YEAST

Yeast is just not a product you can stow away and forget about until you need it in a few years. After all, this single celled microscopic fungus is a living organism so if it's not alive at the time you need it, you'll get no action. When we incorporate yeast into our bread dough, beer wort or fruit juice it begins to ferment madly (we hope) and produce several by-products. If you're baking, the by-product you want is carbon dioxide which is trapped by the dough and subsequently causes it to rise. In brewing or vintning what is wanted is the ethyl alcohol and, if the drink is to be carbonated, the carbon dioxide as well.

Almost all yeasts used for these purposes are in the same genus (*Saccharomyces* or sugar fungi), but several different species or strains within species have evolved and some are more suitable for a particular task than others. It's entirely possible to use grocery store bread yeast to brew beer or ferment wine, but the flavor may leave a great deal to be desired. It's also possible to use yeast from ale brewing to make bread. From my limited experience with trying it myself the results were pretty much indistinguishable from bread yeast.

Types of Baking Yeasts Leaving aside the brewing and vintning yeasts that are outside the scope of this FAQ I am going to concentrate on bread yeast. It comes in two generally available forms; compressed or fresh yeast and dried yeast which is further broken down into active dry yeast and rapid acting also known as rapidrise or bread machine yeasts. Although both of the dry yeasts are in the same species they come from different genetic strains with different performance characteristics and are processed somewhat differently from each other.

COMPRESSED (FRESH) YEAST: Compressed yeast is only partly dried (about 70% moisture), requires refrigeration and keeps even better in a deep freezer. If kept in an air- and moisture-tight container to prevent desiccation this type of yeast will keep for a year in the freezer (0°F, -17°C or less), but only about two weeks in the refrigerator. Unless your kitchen is quite chilly it will not keep on the shelf. It should not have a mottled color or a sour odor. Compressed Yeast is generally available in 0.6-ounce and 2-ounce foil-wrapped cakes. For traditional baking, dissolve compressed yeast in warm (90°-95°F,

32°-35°C) liquids. A 0.6-ounce cake will leaven up to 4 cups of flour (about a pound). A 2-ounce cake will leaven about 12 cups or roughly three pounds of flour.

ACTIVE DRY YEAST: A granular powder with about an 8% moisture content, active dry yeast can be found in either single use foil packets or vacuum-packed foil covered one pound 'bricks'. In general bread making active dry yeast is typically dissolved in water (105°-115°F, 40°-46°C) along with an equal amount of sugar to give it time to resuscitate and actively begin growing before being mixed into the dry ingredients. Bread machines, however, are often different in this regard and you should follow the directions your particular machine's manufacturer gives. Mine calls for putting the dry yeast atop the other dry ingredients completely out of contact with the liquid ingredients until the machine mixes them together. One envelope (roughly 2 ¼ teaspoons) is sufficient to leaven about four cups or roughly one pound of flour.

RAPID ACTING & BREAD MACHINE YEAST: A more finely granulated powder with a lower moisture content than standard active dry yeast the rapid acting version is designed to raise bread as much as fifty percent faster. This lends it to the 'quick' or 'rapid' cycles of many bread machines that eliminate one rise cycle of the bread dough to facilitate faster production. This form of yeast is also generally mixed with a small amount of ascorbic acid which acts as a dough conditioner to give improved rise performance. Rapid Acting yeasts often perform poorly in recipes calling for long fermentation periods. Because of its finer granulation it does not need to be dissolved in liquid first and should be added to the dry ingredients instead. In the case of bread machines follow the manufacturer's directions. One envelope (roughly 2 ¼ teaspoons) is sufficient to leaven about four cups or roughly one pound of flour.

Interchanging Yeast Types

Can fresh, active dry, and rapid acting yeasts be used interchangeably?

Yes, to a certain extent

To substitute Rapid Acting yeasts for Active Dry yeasts reduce the amount of Rapid Acting used by 25% from the amount of Active Dry the recipe calls for then add the dry yeast to the dry ingredients before mixing.

To substitute Active Dry for Rapid Acting increase the amount of Active Dry by 25% over what the recipe calls for of Rapid Acting yeast and dissolve in warm water (105°-115°F, 40°-46°C) with an equal amount of sugar before mixing in with the dry ingredients.

Once 0.6 ounce cake of fresh, compressed yeast is roughly equivalent to one pack of active dry yeast (2 1/4 teaspoons) or to about 1 3/4 teaspoons of Rapid Acting yeast.

NOTE: Substituting one yeast type for another can be done, but will oft times require a bit of tweaking. If at all possible use the yeast type specified in the recipe. If you can't be prepared to make adjustments where necessary.

PROOFING YEAST: Although it's generally not necessary anymore if you are concerned that your yeast may be dead due to age or poor storage conditions any type of yeast can be tested for viability by proofing. This is nothing more than mixing a small amount of the yeast with an equal amount of sugar in warm water 105°-115°F, 40°-46°C for dried; 90°-95°F, 32°-35°C for fresh. Within about five to ten minutes active yeast will become bubbly and begin to expand (at normal room temperature). Yeast which only slowly becomes active can still be used, but you will have to use more. If there is no activity at all, the yeast is dead and should be tossed. If you've stored your yeast in half-way decent conditions, or better yet in the freezer, proofing will usually not be necessary.

NOTE: Rapid Acting yeast loses its fast-rising capabilities if dissolved in liquid for proofing, and will require two complete rises like standard active dry yeast.

STORING YEAST: All of the dry yeasts will last for months on the shelf, until the expiration date which should be clearly stamped on the package. If packaged in an air/ moisture tight container and kept in the freezer it may last for several years though one year is the general recommendation most often found among various authorities. I'm presently (12/2003) using yeast stored in my refrigerator freezer in a tightly sealed canning jar with a "Best Used By" date of June, 1998 that is still going strong. The larger packs of yeast should be transferred to an air and moisture tight container after opening. A canning jar with a decent lid will suffice.