

The Essentialist

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Bigfork's Essential Stuff Newsletter -- Bringing People Together
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What are Pickling and Lacto-Fermentation?

Pickling, or fermentation, is a method of preserving foods, primarily used for fruits and vegetables. Today when we think of pickled foods, we think of vegetables, such as cucumbers, pickled with vinegar (acetic acid). But in times gone by, the preferable way to pickle was simply by fermenting the food in a saline bath, utilizing good microbials present everywhere.

For example, when making wine, certain yeasts living on the grapes, convert the sugars in the grapes to alcohol. A similar process is used in making beer, or sourdough bread. You don't have to add these yeasts, they are simply present everywhere.

In addition to fermenting yeasts, there are also fermenting bacteria present all around us (and also in our gut), that convert the sugars in foods to lactic acid. Lacto-bacteria, such as acidophilus, do the hard work of lacto-fermentation, to preserve foods, and provide health benefits. A perfect example is old-fashioned sauerkraut.

Lactic acid is preferred over vinegar (acetic acid) because it is beneficial to our body. Unlike other fermentation products such as acetic acid and alcohol which have to be detoxified in the liver, lactic acid is actually used by the body. Furthermore, the lacto-bacteria also produce other beneficial substances during fermentation, such as choline.

How does this work?

The idea is to keep putrefying and disease-causing micro-organisms from establishing colonies in the food. An acidic environment (from vinegar or lactic acid) inhibits the growth of these bad bugs. But until a sufficient level of acidity is established, we add a significant amount of salt to the fermenting food, because the salt prevents the bad bugs from becoming established.

Adding liquid whey is optional for pickling vegetables, but essential for pickling fruits. Whey is rich in both lactic acid and lacto-bacteria, and acts as an inoculant to jump-start the pickling process and eliminate (or reduce) the need for added salt. Lacto-bacteria also produce antibiotic substances to keep bad bugs at bay.

It is important to keep the fermenting food submerged in the salt-water bath during the fermenting period. Typically a stoneware crock is used to contain the fermenting brew, and an old dinner plate or wood 'lid' weighted with a brick or stone is used to keep it submerged. For smaller batches, a jar with lid can be used.

For the first few days, keep the ferment at room temperature. Then move to a cool dark place for long-term storage where it will continue to ferment and develop flavor.

Benefits of Pickling and Fermentation

- ✓ Preservation of raw foods;
- ✓ Aid digestion: Fermentation produces enzymes, lactic acid and beneficial bacteria that play important roles in proper digestion of other foods;
- ✓ Increase nutrient content: Lacto-bacteria produce many enzymes, vitamins and other nutrients not available in the food before fermentation;
- ✓ Stimulate the immune system.

Sources

Jars

Wide-mouth Mason or canning jars, available in most grocery or hardware stores can also be used for lacto-fermentation/pickling of smaller quantities.

Crocks, Lids & Pounders

Crocks for pickling and lacto-fermentation should be glazed inside and out with a lead-free glaze, to be safe for food. Be sure to select a size into which one of your plates will fit snugly.

- The Wellness Education Center, 103 Ponderosa Lane, Kalispell; 755-8423
- Lehman's (www.lehmans.com) for crocks, wooden lids, and pounders.
- Simply Natural (www.simply-natural.biz/cookware-fermenting-crock-pots.php). Stoneware (with optional wooden lid) or glass fermenting crocks.
- Country Reflections (www.creflections.com/crocks.shtml). My favorite is the Ohio Stone 3 gallon crock (11.5" high, 10.5" diameter; Bristol Crock item #0003)
- Pressure Cooker Outlet (www.pressurecooker-outlet.com/Opco2L.htm)

Books

Wild Fermentation, by Sandor Ellix Katz, available online at:

- wildfermentation.com (www.wildfermentation.com/books_wildfermentation.php)
- www.simply-natural.biz/fermentation.php;
- [Amazon](http://www.amazon.com) (www.amazon.com);
- The Wellness Education Center, 103 Ponderosa Lane, Kalispell; 755-8423
- Or request special order at Books West in Kalispell 752-6900

Nourishing Traditions, by Sally Fallon, with Mary G. Enig PhD., available online:

- from the publisher: (www.newtrendspublishing.com/SallyFallon/)
- [Amazon](http://www.amazon.com) (www.amazon.com);
- Or request special order at Books West in Kalispell 752-6900

Contact Edd Blackler (blackler@acrossmontana.net, 837-5196),
Edmund Fitzgerald (edmund@montanasky.net, 837-5548), or
Catherine Haug (cmhaug4@earthlink.net, 837-4577)

Recipes

Bread and Butter Pickles

The grape or cherry leaf is an optional addition to each jar. It is used to help keep the cucumbers crispy, and to keep molds at bay. Choose pickling cucumbers if you can find them. Young salad cucs can be substituted, but the pickles will not be as crisp. Keep in refrigerator and eat within 2 - 3 weeks of opening a jar. Makes 2 quarts.

Ingredients & Equipment:

- fresh grape or cherry leaf (optional)
- 7 cups thinly-sliced pickling cucumbers
- 1 cup thinly-sliced sweet onion
- 1 cup fresh lemon juice
- 1/3 cup liquid whey*
- 1 cup honey or maple syrup
- 3 Tbsp unrefined sea salt
- 1 - 2 Tbsp whole celery seeds
- 2 teaspoons turmeric
- 1 Tbsp yellow mustard seeds
- 2 quart-sized, wide-mouth, canning jars with lids
- large bowl

Process:

1. Put leaf into bottom of jar so that it lies flat.
2. Mix cucs with onion in large bowl. Transfer to canning jar and press down lightly with a pounder or meat hammer.
3. Combine remaining ingredients and pour over cucumbers, adding more water if necessary to cover. Keep top of the liquid 1 inch below top of the jar.
4. Cover tightly and keep at room temperature for about 2 days.
5. Transfer to the refrigerator.

Sauerkraut I

This recipe is from Nourishing Traditions (see "Books"), and makes 1 quart. It can be eaten after curing 3 days at room temperature, but taste improves with age (in cold storage).

Ingredients & Equipment:

- 1 medium cabbage, cored & shredded
- 1 Tbsp caraway seeds (optional)
- 1 Tbsp unrefined sea salt
- 4 Tbsp whey *
- wooden pounder (or meat hammer)
- quart-size wide-mouth canning jar, with lid

Process:

1. Mix cabbage, caraway seeds, salt and whey in a large bowl. Pound about 10 minutes with pounder to release juices.
2. Place in jar; press down firmly with pounder, until juices come to top of the cabbage. Do not fill more than 1 inch below the top of the jar.
3. Cover tightly; keep at room temperature about 3 days (to taste); then transfer to cold storage.

*NOTE about whey: Do not use powdered sweet dairy whey, nor whey protein powder. Rather, allow liquid whey to drain from cultured milk products such as yogurt.

See "Sauerkraut" flyer for more recipes