

The Essentialist

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Lacto-Fermentation Recipes: Fruits & Vegetables

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See also: [The Essentialist: Lacto-Fermentation of Seeds, Grains, Dairy & Kombucha](#)

Sauerkraut

Sauerkraut

adapted from 'Nourishing Traditions' (3)

1 medium 'late' Organic cabbage 1 Tbsp caraway seeds
1 Tbsp unrefined sea salt 4 Tbsp whey * (or use an additional 1 Tbsp salt)

1. Core & shred cabbage. Mix with caraway seeds, sea salt and whey. Pound with wooden pounder, potato masher or meat hammer for about 10 minutes to release juices.
2. Place in a quart sized, wide-mouth mason jar and press down firmly with wooden pounder, potato masher or meat hammer until juices come to the top of the cabbage. The top of the cabbage should be at least 1 inch below the top of the jar.
3. Cover tightly and keep at room temp for about 3 days before transferring to cold storage. The kraut may be eaten immediately, but it improves with age.

* Whey is obtained by allowing yogurt or kefir to drain through a fine sieve, or from cheesemaking. It is rich in probiotics which jump start the fermentation process. If you don't have whey, use more salt.

See also ESP printable pdf files:

- [Gathering Summary: Homemade Sauerkraut, & introduction to Lacto-Fermentation](#)
- [The Essentialist: Pickling & Lacto-Fermentation Intro, Sources, & Recipes](#) (handout)
- [The Essentialist: Sauerkraut – 3 Recipes Including Melanie's Recipe](#)

Red or Green Sauerkraut

from Jeanette Cheney

Prep: 30 min Ferment: 3 - 7 days Yield: 12 servings

Cabbage should always be used soon after purchase (while it is still moist) in order to make evenly fermented sauerkraut. Good sanitation is of utmost importance when fermenting (clean containers, utensils, use paper towels to dry hands, etc).

While cabbage is fermenting, it can have a strong odor. It is best to ferment outside of the main area of your home (eg. Laundry room).

4 sticks kombu or 3 whole leaves of Wakame seaweed (instead of salt)

1 Large 'late' Organic cabbage Other root veggies (optional)

Apple, sliced thinly Caraway seeds (optional)

1. Soak seaweed in warm water for 15 minutes.
2. Reserve 3-4 outer leaves of cabbage. Cut out any bad spots. Finely chop or grate remaining cabbage. If extra juice is extracted, add it to mixture.
3. Layer ingredients in a sanitized, tall gallon-sized ceramic lead-free crock (a crock-pot liner is perfect):
 - a. 1" grated cabbage (add other grated root veggies as desired)
 - b. 8 thin apple slices (1 large apple equals 16 slices)
 - c. 2-3" cabbage (may sprinkle with caraway seeds for flavor)
 - d. hydrated seaweed (evenly divided between layers)
4. continue with additional layers of apples, 2-3 " cabbage, seaweed and cabbage again. Press each layer down with your hands, potato masher, or wooden stomper
5. Cover final layer with reserved outer cabbage leaves (can also use parchment paper) and weight it down with a water-filled Ziplock bag or a heavy plate.
6. Cover jar with clean towel and let kraut sit for 3-7 days until the cabbage develops a "tangy" taste. It will ferment more quickly in a warmer room.
7. Discard outer cabbage leaves. Skim any foam off the top of the kraut (this is why it's good to use a tall, narrow crock). Carefully transfer the fermented cabbage to clean jars. Discard apples and reserve the seaweed for use in salads.
8. Secure lids on jars tightly and store in fridge or a cold cellar.

Salt-Free or Low-Salt Sauerkraut

adapted from 'Wild Fermentation' (2)

Options to avoid salt (instructions below):

- Ferment in wine;
- Use seaweed
- Substitute caraway, celery, and dill seeds for the salt

To minimize salt:

- Use unrefined sea salt (which is lower in sodium)
- Use less salt (1 -2 tsp of salt per quart of kraut), and add whey

Other considerations:

- Salt helps develop flavor & preserves crunchiness (salt-free kraut is soft).
- Salt-free kraut has a shorter lifespan than salted kraut, so make smaller quantities.
- Fermentation goes faster without salt; be sure to taste salt-free kraut frequently to monitor its progress, and refrigerate it after a week or so.

Wine Sauerkraut

1. Chop up cabbage, mix in any other veggies or desired seasonings, and pack tightly into a jar. Add 1 cup or so of wine, any kind, enough so the level rises above the cabbage like a brine.
2. Weight with a plate (or other lid that fits snugly inside the crock) and a clean weight (such as a glass jug filled with water). Then cover the whole thing with a cloth to keep dust and flies out.
3. Leave to ferment in an out-of-the-way corner , or in a cool basement for a slower fermentation that will preserve for longer, periodically pressing down to help force the water out of the cabbage.
4. Check kraut every day or two. If mold appears on the surface, skim what you can off the surface (it's hard to remove it all). No worries, it's only on the surface; the kraut below is under the anaerobic protection of the brine.
5. Rinse off the plate and the weight; taste the kraut. It starts to be tangy after a few days and gets stronger as time passes. In a cool cellar in winter, it can keep improving for months; in summer or in a heated room, its life cycle is more rapid.

Savory Seed Sauerkraut

The large quantity of savory seeds keeps the cabbage crunchy, similar to salt.

1. Chop cabbage; mix about 1 Tbsp each of caraway, celery and dill seeds, and grind them with a mortar and pestle or other grinder.
2. Mix seeds with grated cabbage and tamp it tightly into a jar. Add a little filtered water (about 1 cup) to bring the brine above the cabbage level, then weight as described above (Wine Kraut, step 2) and proceed through Wine Kraut steps 3 - 5.

Seaweed Sauerkraut

1. Dulse or any other seaweed will work. Take a good handful of dried seaweed, about an ounce, cut it into small pieces with scissors, then soak it in hot water to rehydrate for 30 minutes or longer.
2. Mix soaked seaweed with chopped cabbage, along with any other veggies or seasonings, and pack tightly into jar. Add the seaweed soaking water as necessary until the water rises above the level of the cabbage. Weight as described above (Wine Kraut, step 2) and proceed through Wine Kraut steps 3 - 5.

Baechu (Cabbage) Kimchi

from 'Wild Fermentation' (2)

Unrefined sea salt	1 daikon radish or a few red radishes
1-2 carrots	1-2 onions, leeks, a few scallions or shallots
3-4 cloves garlic (or more)	3-4 hot red chiles (or more)
3 Tbsp fresh grated gingerroot	fish sauce (optional)

1. Mix a brine of about 4 cups water and 4 Tbsp sea salt. Stir well to dissolve thoroughly. it should taste good and salty.
2. Coarsely chop cabbage, slice radish and carrots, and let the veggies soak in the brine, covered by a plate or other weight to keep the vegetables submerged, until soft, a few hours or overnight. Add other veggies to the brine such as snow peas, seaweeds, Jerusalem artichokes, or anything you like.
3. Preparer spices: grate ginger; chop garlic/onion; remove seeds from the chiles and chop or crush, or throw them in whole. Kimchi can absorb a lot of spice. Experiment with quantities and don't worry too much about them. Mix spices into a paste. Add fish sauce to spice paste if desired (but check label for chemical preservatives, which will inhibit microorganisms).
4. Drain brine off veggies, reserving brine. Taste veggies for saltiness. They should taste decidedly salty, but not unpleasantly so. If too salty, rinse them. If you cannot taste salt, sprinkle with 1-2 tsp salt, mix and taste again.
5. Mix veggies with spice paste, thoroughly, then stuff into a clean quart-size jar. Pack tightly, pressing down until brine rises. If necessary, add a little of the reserved veggie-soaking brine to submerge the veggies. Weight with a smaller jar or a zip-lock bag filled with some brine. Cover jar with a cloth to keep out dust and flies.
6. Ferment in warm place. Taste every day. After about a week of fermentation, when it tastes ripe, move it to the fridge. Or ferment more slowly and more salt in a cool spot such as a hole in the ground or a cellar (traditional method).

Pickles and other condiments

Many of these recipes call for liquid **whey**, which jump-starts the fermentation process by providing lacto-bacteria. It is obtained by allowing yogurt, buttermilk or kefir to drain through a fine sieve, or from cheesemaking. If you don't have whey, use more salt.

Traditional Brine Ferments

from Jeanette Cheney

Any of the following veggies may be used:

Red cabbage

Green cabbage

Celery

Carrots

Broccoli

Cauliflower

Any other veggies (root veggies do best)

Flavoring ingredients:

Caraway seeds

Unrefined sea Salt

Onion and garlic (pureed to mix evenly) Purified water (distilled is best)

1. Shred veggies in food processor, using top-mounted shredding blade [or use a kraut board]. Place in a very large bowl and sprinkle caraway seeds on top. Add onion-garlic puree. Mix well until flavor is consistent.
2. Using a 2-cup measure, place a few inches of mixture into a sterilized, non-lead-glazed crock. Tamp down with a round potato masher, sprinkling in a pinch of salt on top of each layer. Add more layers of veggies & salt, tamping each layer down.
3. When you have filled the crock (not closer than 6" from the top), place the weighting stones on top of the veggie mixture (or else you can place a few fresh cabbage leaves on top, weight with sterilized rocks).
4. Fill crock with brine solution (1 TBS of salt per quart of purified or distilled water). Let sit for a few minutes. Add enough brine solution to cover the weighting stones by 2 " or more.
5. When fermentation is done (4–6 weeks), put the ferment in sterile, glass jars with the juice. Leave two inches at the top of each jar for fermentation if storing in basement. You need only a little space if storing in the refrigerator.

Catsup (Real Ketchup)

from 'Nourishing Traditions' (3)

You never knew ketchup (catsup) could taste so good! I make my own tomato paste because all canned tomato products are contaminated with BPA from the can's lining, and some are also contaminated with lead. Recipe makes 1 quart or 2 pints.

3 cups tomato paste	1/4 cup liquid whey (see note above)
1 Tbsp unrefined sea salt	1/2 cup maple syrup (grade B)
1/4 tsp cayenne pepper	3 cloves garlic, peeled and mashed
1/2 cup fish sauce (commercial or homemade)	

Mix all ingredients in blender. Place in wide-mouth jar(s). The top of the catsup should be at least 1" below the top of the jar. Leave at room temperature about 2 days before transferring to fridge or other cold storage.

Bread & Butter Pickles

adapted from 'Nourishing Traditions' (3)

The grape/cherry leaf (optional) helps 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. This recipe is surprisingly easy and yields a product with wonderful taste--an excellent digestive-- in 2 days! Makes 2 quarts.

Fresh grape or cherry leaves (optional)	7 cups thinly sliced pickling cucumbers
1 cup thinly-sliced sweet onion	1 cup freshly squeezed lemon juice
1/3 cup liquid whey (see note above)	1 cup honey or maple syrup
3 Tbsp unrefined sea salt	2 tsp ground turmeric
1 -2 Tbsp whole celery seeds	1 Tbsp yellow mustard seeds
(or 2 - 3 Tbsp whole pickling spice instead of celery and mustard seeds)	

1. Put a leaf into bottom of each jar so that it lies flat (cut large grape leaf if necessary).
2. Mix cucs with onion in large bowl. Transfer to jars and press down lightly with a pounder or meat hammer.
3. Combine remaining ingredients and pour over cucumbers, adding more filtered water if necessary to cover. Keep top of the liquid 1" below top of jars. Cover tightly; keep at room temperature for about 2 days. Transfer to fridge or other cold storage.

Pickled Beets

from 'Nourishing Traditions' (3)

This recipe works for beets, turnips or a mix of both. If they are small, they can be left whole; otherwise, halve, quarter or slice them. Makes 1 quart.

3-3 1/2 cups beets, turnips or both seeds from 2 cardamom pods (optional)
1 Tbsp unrefined sea salt 4 Tbsp liquid whey (see note above)
filtered water

1. Prick beets in several places, place on a baking sheet and bake at 300° F for about 3 hours, or until soft. Peel cooked beets and raw turnips, then slice, quarter or halve them (unless they are small enough to leave whole). Do not grate them.
2. Transfer to 1-quart wide-mouth jar (or 2 pint jars) and press down lightly with pounder or meat hammer. Combine seeds, salt, whey and 3/4 cup water, and pour over veggies, dividing equally between jars. Add more water to cover the beets; the top of the beets should be at least 1" below the top of the jar. Cover tightly and keep at room temp for about 3 days before transferring to fridge or other cold storage.

Fruit Chutney

from 'Nourishing Traditions' (3)

You can use any combination of fruits or just one type. Makes 1 quart

3 cups fresh peaches, pears, apples, mango or papaya
1/2 chopped pecans 1/2 cup filtered water
2 lemons 2 Tbsp sugar (dried sugar cane juice)
2 tsp unrefined sea salt 1/4 cup liquid whey (see note above)
1/2 cup dark raisins 1 tsp ground cumin
1/2 tsp red pepper flakes 1/2 tsp dried green peppercorns, crushed
1/2 tsp fennel seeds 1 tsp coriander seeds

1. Soak nuts overnight in salty water (1 tsp salt per cup water), then drained, and arranged on a baking sheet and dried 12-24 hours in a warm oven (150° F or less) turning occasionally, until completely dry & crisp. Remove from oven, then chop.
2. Grate rind of lemons, and squeeze the juice. Mix both with water, sugar, salt and whey. Peel & cut up fruit, adding to lemon juice mixture with nuts and remaining ingredients. Mix well; place in wide-mouth mason jar(s). Press down lightly with pounder, adding more water if necessary to cover the fruit. The mixture should be at least 1" below the top of the jar. Cover tightly and keep at room temperature for 2 days before transferring to fridge. This should be eaten within 2 months.

Beverages

from 'Nourishing Traditions' (3)

Beet kvass is valuable for its medicinal qualities and as a digestive aid. One 4-oz glass, morning and night, is an excellent blood tonic, promotes regularity, aids digestion, alkalizes the blood, cleanses the liver, and is a good treatment for kidney stones and other ailments. It may also be used in place of vinegar in salad dressings and as an addition to soups. Makes 2 quarts.

3 medium or 2 large Organic beets ¼ cup whey (see note above)
1 Tbsp unrefined sea salt filtered water

1. Place beets, whey and salt in 2-quart glass container. Do not use grated beets - they exude too much juice which ferments to fast and favors production of alcohol rather than lactic acid.
2. Add filtered water to fill container. Stir well and cover securely. Keep at room temp for 2 days before transferring to fridge.
3. When most of liquid has been drunk, you may fill up the container with water and keep at room temp another 2 days. The resulting brew will be slightly less strong than the first.
4. After the 2nd brew, discard beets (to compost) and start again. You may, however, reserve some of the liquid and use this as your inoculant instead of the whey.

Sources & References

Sources

Kombucha “Mother” [NOTE: these sources have not been verified to be current]:

- Laurel Farms, PO Box 7475, Studio City, CA 91614; (310) 289-4372
- AF Distribution, PO Box 19037, Enico, CA 91416; (818) 708-2299
- Kombucha America, PO Box 1705, Point Roberts, WA 98281-1705; (360) 603 4075; Fax (815) 550-2799

Kefir Starter (reuseable)

- [Body Ecology](http://BodyEcology.com) (866-533-4748 or www.kefir.net)
- [Wilderness Family Naturals](http://www.wildernessfamilynaturals.com/kefir_culture.htm) (www.wildernessfamilynaturals.com/kefir_culture.htm)
- [New England Cheesemaking Supply](http://www.cheesemaking.com/store/p/146-Kefir-2-packets.html) (www.cheesemaking.com/store/p/146-Kefir-2-packets.html).

Kefir Starter (Yogourmet, not reuseable)

- Wellness Education Center (WEC), 103 Ponderosa Ln, Kalispell, MT; 755-8423
- Withey's, 1231 S Main, Kalispell, MT; 755-5260
- Mountain Valley Foods, 25 Commons Way, Kalispell, MT; 756-1422

References

1. Veronica Honthaas
2. “*Wild Fermentation*” by Sandor Elix Katz
3. “*Nourishing Traditions*” by Sally Fallon & Mary G. Enig, PhD.
4. Jeanette Cheney
5. [Kombucha Unveiled](http://users.bestweb.net/~om/~kombu/FAQ/parto1h.html) (users.bestweb.net/~om/~kombu/FAQ/parto1h.html)

Related ESP printable pdf files

- [The EssentialList: Lacto-Fermentation of Seeds, Grains, Dairy & Kombucha](#)
- [Gathering Summary: Homemade Sauerkraut, & introduction to Lacto-Fermentation](http://essentialstuff.org/wp-content/uploads/2009/02/sauerkraut-mhoerner_102208.pdf) (essentialstuff.org/wp-content/uploads/2009/02/sauerkraut-mhoerner_102208.pdf)
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- [The EssentialList: Sauerkraut – 3 Recipes Including Melanie’s Recipe](http://essentialstuff.org/wp-content/uploads/2009/02/sauerkraut2_esl1.pdf) (essentialstuff.org/wp-content/uploads/2009/02/sauerkraut2_esl1.pdf)