

CALDWELL'S STARTER CULTURE

INSTRUCTIONS FOR SAUERKRAUT

Use one pouch (2 g) of culture for 4.4 lbs (2 kg) of shredded cabbage.

INGREDIENTS:

- 2 large heads of cabbage;
- 1 pouch of Caldwell's starter (2 g);
- 3 tablespoons of non-iodised fine sea salt;
- 3 cups of unchlorinated water (at room temperature).

Optional: about 1 teaspoon of caraway, juniper seed, clove, or any other flavors that you like.

EQUIPMENT:

- Cutting board and knife, food processor (optional);
- Container(s) for fermenting: A large crock or straight-sided plastic tub with an airtight lid, or large Mason jars with lids (2 - 4, depending on jar size);
- 3 mixing bowls (1 large and 2 small);
- Large wooden spoon or pounder, and 2 spoons for stirring
- Canning funnel (optional);
- Measuring cup;
- A hard non-porous weight to keep the cabbage submerged (a stone, heavy plate or inverted jar lid).

1. Discard the outer leaves and remove the core of the cabbage;
2. Shred it into thin slices about the thickness of a dime, and if necessary, divide it into equal-size batches that will fit into your large bowl;
3. Dissolve 3 tablespoons of sea salt in 2 cups of room temperature water and stir well;
4. Dissolve the contents of the pouch of culture in a cup of room temperature water and let the solution sit for **no more than 10 minutes**. This will activate the starter;
5. Add the proportionate amounts of starter and salt solutions to each batch of shredded cabbage and mix well for 10 minutes using your (clean) hands or a spoon;
6. Place the mixture in your container. Pack down well to make sure there are no air bubbles;
7. Allow the juice to cover the cabbage, leaving a space of some 2 inches above the mixture, and place the weight on top to keep the cabbage submerged. Put the lid on the container, but don't seal it tightly until the end of the fermentation (step 9);
8. Leave the container at room temperature (70°F/20°C) and let it sit for 7 to 10 days to adequately ferment. This time is required for bacteria from the starter to grow, transform sugars from the cabbage into organic acids and produce healthy components;
9. Seal the container and put it in a refrigerator or a cool room (40°F/4°C) for the curing period. You can eat the sauerkraut at this stage, but it's better to let it sit for 6-8 weeks. The longer you keep the sauerkraut refrigerated, the tastier it will be. This is due to the mellowing effect of the curing period. After opening, you can repack the sauerkraut in smaller containers or in vacuum packs. You can also freeze it for long-term storage.

OTHER VEGETABLES:

You can use other vegetables such as carrots, beets, turnips, parsnip, black or daikon radish. Make sure you wash these well, remove both ends and any major blemishes. For better results, you can replace 20% of the vegetable with cabbage.

For more delicious recipes, visit: www.caldwellbiofermentation.com

See overleaf for a glimpse into the science behind the process.

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THE SCIENCE OF LACTO FERMENTATION

Lacto fermentation (also known as lactic acid fermentation) is a traditional method of conserving food. Foods that are correctly fermented are safe for consumption and provide a large number of health benefits, as well as a wide variety of flavours and aromas.

Lactic acid bacteria are responsible for the fermentation. During the process, sugars are converted to lactic acid or to a mixture of acids, which help to preserve the vegetables.

The key to successful fermentation lies in controlling variables. These variables include the fermenting temperature, salt concentration and quality, water purity, and the quality of the starter (bacteria). If some or all of these are not appropriate for lacto fermentation, the acidity (pH) may not drop quickly enough and molds, yeasts, or unwanted bacteria may be produced.

TEMPERATURE

The ideal temperature for fermenting vegetables is a constant 70°F (20°C). Try to keep the fermenting container at this temperature for the duration of the fermenting period (7 to 10 days). If the temperature is not appropriate, then the ratio of lactic and acetic acids produced during the fermentation will not be adequate.

SALT

Salt plays an essential role in the fermentation process and enhances the quality of the final product. In fact, a salt content of 1.8% creates osmosis, liberates the vegetables' sugars, encourages lactic acid bacteria rather than pathogens, and inhibits pectin enzymes to help avoid a mushy texture. Only finely ground and non-iodized salt should be used, as additives can disrupt the fermentation.

WATER

The water used to dissolve the salt and the starter should be pure and unchlorinated, to keep our bacteria alive.

STARTER

An effective starter culture, when used correctly, helps to control the fermentation process. The starter provides an ideal environment for the fermentation to start, and also stabilizes the process, resulting in consistently successful fermentation. Our starter is the result of 15 years of research and development in commercial organic fermentation, and contains the correct bacteria strains in the ideal proportions, thus maximizing the chances of success. It is important to dissolve the starter thoroughly, and then mix the starter solution well with the vegetables. This will ensure that the bacteria are well distributed throughout the mixture.

For further information, and to purchase more starter or our delicious raw cultured vegetables, see www.caldwellbiofermentation.com.

Produced by Caldwell Bio Fermentation Canada Inc.

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