"Create Your Own" Fermenting Formulas Cheat Sheet

Want to make up your own salsa with your garden's green tomatoes? How about a kraut with root vegetables, cabbage and onions? Want to pickle some fish with peppercorns? This cheat sheet is for you.

Hi, I'm Wardee from Traditional Cooking School at GNOWFGLINS. I've been fermenting for years (I'm the author of **The Complete Idiot's Guide to Fermenting Foods**, Penguin 2012). I grew up around cultured foods from the Middle East, like cheese and olives. That's probably why these are my favorite foods even today.

Through my work online, I've been blessed to help thousands of people make (and love) fermented foods at home, safely and easily. I'm honored you're here so I can help you, too. Be sure to check out the last pages of this cheat sheet, to find out more information about whey, veggie starter cultures, and the basic brine. —Wardee

Chutney and Preserves Formula

Pack chopped up or mashed fresh fruit, dried fruit and/or nuts in a jar or crock. Add seasonings and add-ins. Add around 1/4 cup of sweetener, 1 teaspoon sea salt, and 1/4 cup of whey (or veggie starter culture equivalent*) per quart. Leave 1" free at the top of the jar. Cover and let ferment at room temperature for 2 to 3 days. Transfer to cold storage.

Fruit Butter Formula

Soak 2 parts dried fruit with 1 part water for 15 minutes to a half hour. Puree together until smooth in food processor or blender. Add 1/4 cup sweetener, 1 teaspoon real salt and 2 tablespoons whey (or veggie starter culture equivalent*) per pint. Blend until smooth. Put in jars, leaving 1" free. Cover and let ferment at room temperature for 2 days. Transfer to cold storage.

Pickle Formula

Pack whole or cut up veggies in a jar or crock. Be sure to cut the blossom ends off cucumbers. Add seasonings, add-ins and herbs. For crisp pickles, add 1/8 teaspoon black tea or some oak or grape leaves. Cover with basic brine** to within 1" jar of jar lid. If using sweetener, add 1/4 cup of whey (or veggie starter culture equivalent*) per quart. Leave 1" free at the top of the jar. Cover and let ferment at room temperature until done. Transfer to cold storage.

Salsa Formula

Pack a chopped mixture of desired ingredients into a quart size jar, such as tomatoes, onions, peppers (mild or hot), cilantro, salt, whey (or veggie starter culture equivalent*) and lemon/lime juice. Leave 1" free at the top of the jar. Cover and let ferment at room temperature until done, two to three days. Transfer to cold storage.

Relish Formula

Create a mixture of cut up veggies. Mix with 1/2 tablespoon sea salt, 1/4 cup whey (or veggie starter culture equivalent*), seasonings, add-ins and herbs. Pack in quart size jar to within 1" jar of jar lid. If using sweetener, do not omit whey (or veggie starter culture equivalent*); otherwise, you can omit whey by doubling the salt. Cover and let ferment at room temperature until done, two to three days. Transfer to cold storage.

Condiment Formula

Make condiment mixture. Keep the sweetener level on the low side, a tablespoon or two per quart. Ensure there is 1/2 to 1 teaspoon of sea salt per 2 cups of mixture. Add around 1 tablespoon of whey per cup of mixture (or veggie starter culture equivalent*). Pack into a jar and let ferment overnight or up to a few days. Transfer to cold storage.

Pickled Meats Formula

Create a mixture of chunks of meat and additional veggies or flavor ingredients, and pack in quart jar. Add 1/4 cup whey (or veggie starter culture equivalent*) plus 1 tablespoon of sweetener (optional, but recommended). Add basic brine** to cover within 1" of jar rim. Weight down ingredients. Cover tightly with lid or airlock. Leave at room temperature for 1 day then transfer to cold storage.

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Wardee

I’d love to chat with you about it — reach out any time!

—Wardee Harmon from Traditional Cooking School by GNOWFGLINS
https://TraditionalCookingSchool.com

*About Whey and Other Starter Culture Equivalents

You may have seen whey mentioned in the fermenting formulas. Or, you can use a veggie starter culture equivalent. So, it's important to cover exactly what whey is, which forms will work for fermentation, and how to get it. We use whey to inoculate ferments with a colony of beneficial organisms from the beginning, so the whey must contain those beneficial organisms — some whey does and some does not. You need to use the right whey (or equivalent).

What Whey Is

Ever opened a tub of yogurt and seen ribbons of yellow liquid surrounding the curds? That is whey.

Whey is what spills out of dairy when it is fermented (soured or cultured). Beneficial organisms proliferate throughout dairy, consuming the milk sugar (lactose) and producing acids which curdle the milk. This souring can progress so that the milk separates into distinct curds and whey, or you can press or hang the curds so that the whey spills out.

The process of thickening milk to getting curds and whey is a continuum of the same process. You can get whey from buttermilk, sour cream, yogurt, kefir, chevre, and all kinds of cheeses.

Which Whey You Can Use In Fermentation

I want to be clear that the highly processed whey protein powder that is sold as a nutritional supplement is *not* the kind of whey we would use in fermentation (nor is a real, whole food).

Additionally, sometimes people make cheese at high temperatures or heat dairy after it is fermented. In these cases, the living organism perish from the high temperatures.

So anytime you're wondering if the whey you have will work, ask yourself this question: **from the time the milk was cultured (either through inoculating it or allowing naturally present organisms to flourish), was it heated much beyond 100 degrees Fahrenheit?**

If it was not heated excessively, then the whey contains living organisms and can be used for fermentation. If the whey was heated (such as in high temperature cheeses like mozzarella, ricotta, or farmer's cheese), it cannot be used.

How To Get Whey

When making low temperature cheeses, whey will spill out from pressing or hanging curds. Most people use the whey from making kefir or yogurt cheese. You can use store-bought plain kefir or yogurt, as long as they contain active cultures.

Whey from these cultured dairy foods is mild tasting, making it suitable for all kinds of fermentation, and it is easy to make. One half gallon of kefir, yogurt or soft cheese will yield about a quart of whey. Here's how to do it.

- Line a colander with two pieces of 90-count cheesecloth or a pillow-case weight piece of cotton cloth.
- Put the colander inside a pot or bowl that holds it.
- Pour the cultured dairy into the cheesecloth-lined colander. Tie up the ends and tuck them inside the colander. Let the whey drip out for about a day, or hang up the bag so gravity can speed up the process.

- Scrape the cheese out of the cheesecloth and use as you would cream cheese.
- Pour the whey into a clean jar and store in the refrigerator for many weeks. Or freeze for many months.

The whey will last a long time. It is normal for a few milk solids to slip through the cheesecloth with the whey. Over time, they can get moldy floating at the top of the whey. Strain them off as necessary, and usually the whey is fine. It should smell fresh; let your nose be your guide.

A small number of organisms perish when freezing, and over time more die. Still, freezing is a good option to keep whey for up to a year.

Don't be afraid to think outside the box! If you don't have yogurt or kefir, drip buttermilk or clabber! Remember, *any* low-temperature cultured dairy will work. If you have any questions, please feel free to visit the forums to ask me.

Dairy-Free Substitutes For Whey

Can't have dairy? Don't worry — you can kick-start your lacto-fermentations with non-dairy starter cultures. Here are your options and how much to use.

- **Leftover Fermenting Juice.** The juice of previously fermented pickles, sauerkraut or other ferments is rich with beneficial organisms. Use at the same rate as whey. However, keep in mind flavor matching; a pickle juice is probably not going to taste very good inside a fruit ferment.
- **Finished Water Kefir.** Use at the same rate as whey: about 1/4 cup per quart of ferment.
- **Water Kefir Grains.** This is an idea shared by ChristineC, a Traditional Cooking School member. She uses 1 tablespoon extra water kefir grains per quart of ferment, and scale up from there. Similarly (although not dairy-free), you can use 1-1/2 teaspoons of extra dairy kefir grains per quart of ferment.
- **Body Ecology or Caldwell's Veggie Starter.** Find these at CulturesforHealth.com. Mix 1/8 to 1/16 teaspoon of the powdered culture into 1/4 cup of water; use in place of whey for one quart of ferment.
- **Homesteader Supply's signature veggie starter culture.** Find this at HomesteaderSupply.com. Mix 1/16 teaspoon of the culture with 1/4 cup of water; use in place of whey for one quart of ferment.

What if a recipe doesn't specify a starter culture and you want to use one? Generally, 1/4 cup of liquid starter works for one quart of ferment. Scale up accordingly. If a recipe calls for another amount, by all means follow the wisdom of the recipe author. However, like many aspects of traditional cooking, starter culture usage is not an exact science and a range of amounts will probably work.

**Basic Brine

Dissolve 6 tablespoons of fine sea salt in 1/2 gallon of water. Heat it up to help dissolve it, or stir until the salt dissolves. If you use heat, make sure to let the brine cool to room temperature before using it. You may also dissolve the salt in a small amount of water over heat, then add cool water to make the full 1/2 gallon. Scale up as needed. Store in a sealed jar at room temperature and use as needed where my recipes call for basic brine.

You might find other salt to water ratios in basic brine recipe. There's a great deal of flexibility in salt brines, and people prefer different levels of saltiness. Some people use as much as 1 tablespoon per cup of water in a fermenting brine; I find this tastes much too salty even though it is not too salty for lacto-fermentation to occur successfully.

When using my salt brine proportions in your ferments, you do not need to use whey (or a substitution) as a starter culture. However, you can if you wish. The salt does not need to be increased or decreased when using a starter culture. However, you may reduce the salt strength if you prefer a less salty flavor;and if you reduce the salt, I recommend using whey or another starter culture to ensure successful fermentation.