

ALMOND CHEESES AND SPREADS

(USING PROBIOTIC PILLS AND LACTO-FERMENTED VEGETABLE BRINE)



Here are variations on how to make vegan almond spreads and cheeses (cheeZes).

Using probiotic pills as a starter culture

Ingredients for three methods (spreadable, pressed, parmesan crumble)

- 300g soaked and blanched almonds (see method below for soaking and blanching)
- 150 ml water
- 1 probiotic capsule
- 10 grams salt

Soaking and Blanching

Method

- Soak almonds for 24 hours.
- Pour boiling water on the almonds and after 5 mins, take the skins off the almonds.

Spreadable cheese

Yield

450 g

Supplies

- Blender
- Jar

Method

- Blend the almonds, water and probiotic capsule together on high speed for 2 mins
- Put mixture in a 500ml jar, and put in incubator for 8 hours at 30°
- After 8 hours the mixture will have fermented and puffed up
- Mix in salt
- Enjoy as a soft cheese as is. Will ripen in the fridge for up to 3 weeks.



Almond R&D Alexis Goertz - Edible Alchemy
For the Almond Board of California

california
almonds[®]
Almond Board of California

Pressed cheese

Yield

375g

Supplies

small cheese press ([for example](#))

Method

1. Follow steps from spreadable cheese, then put contents in a small cheese press to press out excess water for 2 days in the fridge.
2. Remove from the cheese press and enjoy as is or cover in spices or ashes to add new flavours.
3. Enjoy within 3 weeks as a sliceable cheese



Parmesan style

Yield

330 g

Supplies

- Drying tray
- Dehydrator or aerated area
- Jar for storage

Method

- Follow steps from above, then take the pressed cheese and crumble onto a tray.
- Place the tray in a dehydrator or a well ventilated area at 25°C for 48 hours.
- The taste resembles the tang of parmesan and can be stored in the fridge in a sealed jar for 8 weeks.



Almond Cheeze: Using lacto-fermented vegetable brine as a starter culture

This rich vegan cheese is an immediate palate pleaser. Serve Almond Cheeze on sourdough bread or as part of a plant-based charcuterie board.

Yield

230 grams

Supplies

- 230-milliliter sealable jar
- Cheesecloth

Ingredients

- 150 grams raw blanched almond
- 80 milliliters Lacto-fermented vegetable brine, plus a dash for smoother texture
- 2 tablespoons dried herbs (such as thyme, rosemary, or oregano)

Method

- In a blender, combine the almonds and brine, and blend until smooth. Depending on the power of your blender and the moisture in the almonds, you may need to add an extra dash of brine to obtain a smooth texture.
- Spread out half of the dried herbs in the center of the cheesecloth. Use a spatula to drop the almond puree in the center, on top of the herb mix, and coat it with the remaining herbs. Wrap the bundle up and place it on a plate or in a bowl in the fridge overnight (8 to 12 hours). For a deeper, cheesier flavor profile, let it ripen for up to 7 days. Flip it over daily to allow both sides to get air exposure and slowly dry out. The longer it sits, the harder it will get as the moisture is drawn out. It will also develop a light crust. Once ripened to your liking, take the Almond Cheeze out of the fridge and serve.



Almond R&D Alexis Goertz - Edible Alchemy
For the Almond Board of California

california
almonds[®]
Almond Board of California

ALMOND MISO

(USING PARTIALLY DEFATTED ALMOND FLOUR)



If you are searching for a source of plant-based umami, miso packs a punch of taste! The traditional Japanese bean paste is a highly versatile tool in the kitchen. It requires a two-step fermentation process— starting with rice koji. Koji is a fermented rice using the fungus culture *Aspergillus oryzae*. Koji is a powerhouse of enzymes which are used to breakdown components in food to release new tastes and unleash more nutrients. Koji is then mixed with beans and salt for further fermentation and aging to make miso. Here we replace the beans, the source of protein and carbohydrates, with partially defatted almond flour. As we want to reduce the fat to reduce the amount of oxidized fatty acids, which taste rancid, we use partially defatted almond flour for this.

Fermentation times range from just three weeks to several months. The salt allows the high protein mixture to age without becoming vulnerable to other competing organisms and spoiling. The enzymes in the koji open up new aromas in the almond flour releasing and incredibly umami product that is a versatile tool in cooking and even baking!

Yield

900 g

Supplies

- 1 liter sealable jar
- Plastic wrap

Almond R&D Alexis Goertz - Edible Alchemy
For the Almond Board of California

Ingredients

- 300 g partially defatted almond flour
- 200 g rice koji
- 400 ml unchlorinated water
- 35 g salt, +1tbs for on top

Method

- In a large mixing bowl, combine almond flour and water and let sit for 30 mins
- Add rice koji and salt to the mix and fold in or to get a smoother consistency use a hand blender to blend everything together into one paste.
- In a clean jar, pack the miso mix so that there are no air pockets between layers
- Smooth the top out and with the remaining salt, sprinkle on top for a smooth layer. Cover with plastic wrap and close the jar and wait a minimum of 3 weeks at room temperature for the miso to ripen.
- After three weeks, check for any signs of mold or spoilage. If mold is on top, scrape off and cover with a new layer of salt. Use for soups, sauces and flavouring. Store the jar in place with a stable temperature where it doesn't get too hot, like a basement.



 **california
almonds**[®]
Almond Board of California

ALMOND TEMPEH

(USING RAW OR BLANCHED WHOLE ALMONDS)



Tempeh, a protein-rich, fermented marvel, is deeply embedded in the vibrant tapestry of Indonesian culinary history. Tempeh is an excellent source of plant-based protein, containing all nine essential amino acids, making it one of the few non-animal foods that is a complete protein source. This includes vitamin B12 which is essential for nerve function, DNA synthesis, and the production of red blood cells. Originally made with soybeans, here we take the alchemistic route and use an array of locally available beans, lentils, seeds and nuts to expand the textures and flavors of my tempeh.

In this recipe, we add almonds which are a great source of protein and fiber and add extra nutrients as well as almonds' nutty taste when fried or baked, making this already 'super food' even greater!

Yield

1 kilo

Supplies

- Food thermometer
- Incubator or environment that 27° to 30°C for 48 hours
- Four 17 x 17-centimeter zip-lock bags

Almond R&D Alexis Goertz - Edible Alchemy
For the Almond Board of California

Ingredients

- 300 grams dry legumes (such as soybeans, kidney beans, lentils, peas, black beans, or chickpeas)
- 200 grams whole almonds
- water 2 tablespoons vinegar
- 4 grams / 1 teaspoon *Rhizopus oryzae* or *Rhizopus oligosporus* spores

Method

Soaking the Legumes & Almonds

- Soak the legumes in water overnight (for 8 to 12 hours)—depending on the legume, they will expand and double or even triple in size.
- Soak the almonds in water overnight in another bowl.



california
almonds[®]
Almond Board of California



Cooking, Drying, and Inoculating the Legumes & Almonds

- Transfer the soaked legumes to a large pot and pour in the rest of the (the water level should be about 4 finger-widths above the legumes). Cook them on medium heat until they are al dente—they should be almost soft but still have a bit of a bite.
- Once cooked, strain all of the water. Then, place the legumes back in the pot and return them to the stove. Add the vinegar here; The legumes and pot will still be hot, so stir quickly so they do not burn. During this process, crush open the legumes' hulls with a wooden spoon. Be careful not to mash them—only apply enough pressure to slightly break open their skins. Keep stirring vigorously until all the moisture has evaporated and the legumes are very dry. Then, remove the pot from the heat and transfer the legumes to a bowl to cool down to 35°C.
- While cooling, roughly chop the almonds into halves or thirds and add them to the legume mix. Cutting them allows the spores to get access to the almond proteins and carbohydrates.
- Once the legume-almond mix is cooled, sprinkle the Rhizopus spores over the mix and toss them well.

Packing the Mix in Plastic Zip-Lock Bags

- Perforate the zip-lock bags with small holes in 2-centimeter intervals using a knife.
- Divide the legume-almond mix equally between the bags using a spoon.
- Seal the bags and fold the extra space—the aim is to reduce the size so that the legume-almond mixture is packed between 2.5 to 3 centimeters thick. To ensure it's evenly distributed inside the bags, slap each one on the counter.

Incubating (Fermenting)

- Place packaged inoculated mix in your incubating area. Be sure to maintain the temperature between 27° to 30°C. for the next 36 to 48 hours (the first 15 to 20 hours are the most important). By hour 20 the Rhizopus spores will become so active they will start generating their own heat, signaling the mycelium is at work. To prevent the legumes from overheating and rotting, turn your heat source off or down, or simply to open the incubator lid or door and allow fermentation to continue on its own.
- After 36 to 48 hours, the spores will have fermented the beans into a white mycelium block that holds everything together—Tempeh!

Marinating, Frying, Baking, or Steaming Tempeh

- Marinate Tempeh in honey or maple syrup and miso overnight (for 8 to 12 hours).
 - To fry Tempeh, heat oil in a pan, fry the Tempeh with a pinch of salt or a dash of soy sauce, together with diced onions, ginger, and garlic. Fry both sides of the Tempeh on high heat until golden-brown (about 5 minutes). During this time, move the other ingredients around in the pan so they don't burn. For a smokey BBQ taste, add a dash of liquid smoke.
 - To bake tempeh, preheat your oven to 180°C and bake on a baking sheet lined with parchment paper for 15 minutes.
- To steam Tempeh, sprinkle it with salt, then steam it in a steaming basket for 20 minutes.
- Alternatively, crumble Tempeh into other recipes as a minced meat substitute or cut it into cubes and add it to soups, sauces, or curries.

