

# Food Preservation 101



# Wojapi (Berry Sauce) for Canning

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Wojapi (Woh-Zjah-pee) is a Native American berry sauce that can be used with sweet or savory dishes. Wojapi is a food associated with the Lakota and Dakota peoples. Traditionally, the sauce was prepared with chokecherries and thickened with flour from prairie roots.

This multipurpose sauce can be used to top breads (fry bread, cornbread) and meat (chicken, bison, pork chops, steak), as well as ice cream, pancakes and oatmeal.

The canning recipe in this handout is a modified version of the original recipe inspired by a research-tested berry pie filling. It can be canned in a boiling water bath canner and stored on your shelf.

 See NDSU Extension's "Food <u>Preservation: Let's Preserve</u> <u>Fruit Pie Fillings</u>" (FN434) for additional recipes.

# Preservation: Canning

## Function of Ingredients

The Wojapi recipe contains granulated white sugar, Clear Jel and bottled lemon juice.

#### Why are these ingredients important in canning?

**Sugar** is used to sweeten the recipe. Many food preservation recipes use sugar as part of the food preservation method to maintain a consistent sweetness. Remember to use recipes from a reputable source for preservation, and only make changes if directed by the recipe to prevent foodborne illnesses. Honey may be added to replace part of the sugar in the recipe; however, too much may hide the fruit flavor or alter the consistency.

**Clear Jel** is a modified food starch that aids in thickening the berry sauce to a smooth consistency. Unlike cornstarch, Clear Jel does not change the transparency of the sauce. The sauce remains clear (hence the name).

- Clear Jel also does not break down in the presence of heat or acidity, so it is suitable for making canned or frozen pie filling. This ingredient is available in some retail stores and can be ordered online.
- Other types of thickeners, such as cornstarch or flour, can break down during freezing or canning. Using those ingredients can result in a product that is thin and watery.

**Bottled lemon juice** maintains an acidic environment to prevent bacterial growth. Bottled lemon juice maintains a consistent acid level compared to the juice squeezed from a fresh lemon. Changing the amount of lemon juice in a canning recipe can make the recipe unsafe.



Produced in collaboration with Cankeska Cikana Community College - Spirit Lake Tribe (https://www.littlehoop.edu/)

#### Freezing

When Clear Jel is used as the thickening agent, Wojapi keeps its quality when frozen. After you make Wojapi, let it cool, add to a labeled freezer bag or container and then freeze for up to six months for best quality. Thaw in the refrigerator and serve cold or hot.

#### **Key to abbreviations**

Tbsp. = tablespoon c. = cup

a = aramoz. = ounce mg = milligram tsp. = teaspoon

#### **Canning Tips**

Jars with two-piece metal lids and metal screw-bands (called "rings") are recommended. Wash the jars and prepare the lids according to the manufacturer's instructions. A dishwasher may be used to wash the jars and hold them hot until ready to be filled, but dishwashers cannot be used for canning. Glass jars can be used many times, but lids can be used once.

 Most lids do not require heating before placing them on the jar.

**Tip:** Examine the top of a standard Masonstyle canning jar. It has threads made of glass where the screw band is tightened.

The thread closest to the top of the jar is ¼ inch from the rim, the second thread is ½ inch from the rim and the third thread is 1 inch from the rim. Use these measures to help determine how high to fill the jars, or use a special canning tool to help determine headspace. The recipe provided recommends a 1-inch headspace.

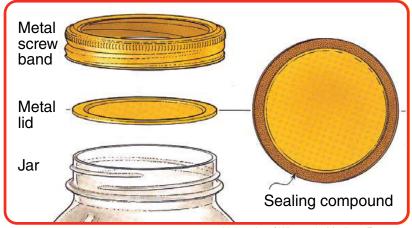
After filling, wipe the jars clean and apply the lids and rings. Tighten the screw band fingertip-tight.

Preheat boiling water canner to 180 degrees Fahrenheit, lower sealed jars onto the canner rack and add to the water. Add more water if needed so the water level is 1 to 2 inches above top of the jars. When water begins to boil, lower the heat, maintain a gentle boil and process for the recommended time.

After processing, turn off the heat, remove the lid from the canner and allow it to stand for 5 minutes. Remove the jars from the water using a jar lifter, place on a towel or hot pad and let air-cool for 12 to 24 hours. Remove the screw bands and check the lid seals. The center of the lid should be indented or concave. Label and store in a cool, dark place for up to one year.

#### What if a jar does not seal?

Store unsealed jars of food in the refrigerator and consume within several days. The contents of the jar can be frozen in a freezer container.



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#### Resources

Wojapi (Dakota Berry Sauce). Available from the First Nations Development Institute, Longmont, CO at www.firstnations.org/recipes/wojapidakota-berry-sauce/

Wild Berry Wozapi Sauce. Available from Forager/Chef at <a href="https://foragerchef.com/wild-">https://foragerchef.com/wild-</a> berry-thinpsinla-wozapi/

#### Online Food Preservation Course

"Food Preservation 101" is a self-paced, narrated, online class available several times per year. See <a href="https://www.ndsu.edu/agriculture/extension/food-">www.ndsu.edu/agriculture/extension/food-</a> preservation-101 for more information. NDSU Extension and Cankdeska Cikana Community College partnered on this project made possible with funding from the U.S. Department of Agriculture National Institute of Food and Agriculture Food Safety Outreach Program (2022-70020-37999)



## Wojapi (Berry Sauce)

3 ½ c. mixed berries

34 c. plus 2 Tbsp. granulated white sugar

1/4 c. plus 1 Tbsp. Clear Jel

1 c. cold water

3 ½ tsp. bottled lemon juice

- 1. Wash hands with soap and water.
- 2. Prepare jars and keep hot.
- 3. Wash lids as directed by manufacturer.
- 4. Bring 8 cups of water to a boil.
- 5. Wash berries, drain and add them to the pot.
- 6. Boil for one minute and drain water thoroughly.
- 7. Cover drained berries to keep warm.
- 8. In a heavy pan, add sugar, Clear Jel and water.
- 9. Cook on medium-high heat until thick and bubbly.
- 10. Add lemon juice and boil for 1 minute more, stirring constantly.
- 11. Fold in berries and fill a 1-quart jar (or two 1-pint jars), leaving 1 inch of headspace.
- 12. Add lids and rings. Tighten fingertiptight, and process immediately according to the directions in Table 1.

Makes 1 quart or 2 pints. Can the pints and the guarts for the same length of time in the water bath canner.



Learn more about fruits from NDSU Extension's Windbreak Cookbook Featuring Fruits of Prairie Forests.

#### Table 1. Process time for fruit pie filling at different altitudes

0-1,000 feet	1,001- 3,000 feet	3,001- 6,000 feet
30 minutes	35 minutes	40 minutes

Nutrition: Makes sixteen 1/4-cup servings. Each serving has 90 calories, 0 g fat, 0 g protein, 22 g carbohydrate, 2 g fiber and 10 mg sodium.











# Did you know?

Cinnamon enhances the natural sweetness in recipes for baked goods, desserts and beverages.

This recipe is made with half whole wheat flour, which is a good source of fiber, vitamins and minerals. Current nutrition guidance recommends making half of our grain choices whole grains.

For safety.

do not eat

raw dough.

# Whole Wheat Wojapi and Cinnamon Hand Pies

1 c. all-purpose flour

1 c. whole wheat flour

¼ tsp. salt

½ tsp. baking powder

½ tsp. cinnamon

<sup>2</sup>/<sub>3</sub> c. cold unsalted butter

½ c. nonfat Greek yogurt

½ c. canola oil

1 egg yolk (approximately 1 Tbsp.)

2 Tbsp. white granulated sugar

Filling (Wojapi or jam)

- 1. Preheat oven to 425 F.
- 2. Wash hands with soap and water.
- 3. In a large bowl, whisk together the flours, salt, baking powder and cinnamon.
- 4. Add the cold butter and using a pastry cutter or your hands, incorporate until a crumbly mixture forms with pea-size butter particles.
- 5. Stir in yogurt and oil, then turn out onto a work surface and knead.
- 6. Shape the dough into an 8" log and then roll out into a 8-by-12-inch rectangle.
- 7. Dust with all-purpose flour and fold in three, like a letter.
- 8. Flip the dough over and roll into another 8-by-12-inch rectangle.
- 9. Fold in three again.
- 10. Wrap in plastic wrap and chill for at least one hour.
- 11. Roll dough out into a 14-by-14-inch square.
- 12. Cut dough into 16 equal squares.
- 13. Scoop 1-2 teaspoons of Wojapi onto 8 of the squares.
- 14. Cut a slit diagonally in the middle of the 8 empty squares only an inch or so wide, making sure not to cut all the way to the edge.
- 15. Place the cut squares on top of the Wojapi-filled squares and use the fork tines to seal the edges by pressing down.
- 16. Place the pies onto a cookie sheet lined with parchment paper.
- 17. In a small bowl, beat the egg yolk and use a pastry brush or spoon to brush or pour over the pies.
- 18. Sprinkle with sugar and bake for 18-20 minutes.

**Nutrition:** Makes 16 servings (one small pie per serving). Each pie has 170 calories, 12 g fat, 3 g protein, 13 g carbohydrate, 1 g fiber and 55 mg sodium.

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#### For more information on this and other topics, see www.ndsu.edu/extension

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