Home Pickling of Fish

UPDATED BY SUZANNE DRIESSEN, FOOD SAFETY EDUCATOR, UNIVERSITY OF MINNESOTA EXTENSION EDITED BY ELIZABETH WHITE, UNIVERSITY OF WISCONSIN SEA GRANT INSTITUTE

As applied to fish, pickling generally means a fish product that has been processed with vinegar as an ingredient in the curing process. If this is the first time you have tried pickling at home, you will be pleasantly surprised at how easy it is and what a delight a freshly pickled fish is to eat.

The size, fat content and flesh of herring make them especially well-suited for pickling, and they are the most

common kind of pickled fish sold commercially. Other commercially pickled seafood include salmon, haddock, oysters, sardines, eels, shrimp and clams—but such products are usually sold only as specialty items in small local or ethnic markets.

While the kinds of fish pickled commercially are limited, any fish can be pickled. Northern pike is perhaps one of the best game fish for pickling. Suckers are very good, and even carp are tasty when pickled. The type of fish you use matters only in chunk-style pickling, in which case you should use only thin-skinned, small-boned varieties of fish.

If you want to make a herring-type pickled product with other types of fish, various characteristics of the product will be different. Home-pickled fish may not have the same taste or "mouth feel" as that sold

commercially. It may be firmer, drier or have a different color or taste. You may like it more or less then commercially pickled fish—the point is that you shouldn't expect it to be exactly the same.

Main Ingredients

FISH

It is best to use high-quality frozen fish to ensure that any parasites in the fish are destroyed. If you freeze it yourself, keep it frozen for at least four days. Commercially frozen fish may be thawed and used right away.

Also, the type of fish used will affect the texture and color of the final pickled product. Fish species differ in bone size and skeletal structure, flesh color or pigmentation, fat content, the location of fat in the tissues, muscle size, length of muscle and the quantity of muscle.

WATER

Good quality (drinking) water should be used to make all brine and spice mixtures. Avoid using "hard" water especially water high in iron, calcium or magnesium. The presence of these metals in the pickling solution may cause bitter flavors in the pickled fish. If you must use hard water, treat your brine by boiling, cooling and then filtering

> it through several layers of filter paper, such as coffee filters, to remove any precipitate that forms before using it for pickling.

VINEGAR

Use commercially distilled (white) vinegar that is clear, without foreign odors or flavor, and has a guaranteed acetic acid content of at least five percent. The use of vinegar (acetic acid) at the recommended levels will help prevent bacterial growth in the final product. Cider or other fruit vinegars may be used to pickle fish, but the acid content of fruit vinegars is more variable than white vinegar, and fruit flavors and pigments in these vinegars may give the final pickled fish product an off-flavor and color.

SALT

Use only pure, high-grade granulated pickling or canning salt. The salt used in pickling fish should have low concentrations

of calcium, iron and magnesium because, as mentioned above, the presence of these ions may cause bitter flavors as well as undesirable color changes in the pickled fish. For similar reasons, do not use sea salt, iodized salt or regular table salt.

SUGAR

Table (cane or beet) sugar is recommended as the sweetening ingredient in the pickling solution. You may substitute corn syrup for some of the sugar, but be aware that it may add a slight corn flavor and that the sweetness level is more difficult to control. If corn syrup is used, you will have to experiment with the quantity necessary to achieve the desired effect and flavor.







EAT WISCONSIN FISH

1. Preparing the Fish

FILLET STYLE

Any species of fish can be used for this type of pickling. Again, the quality of the raw fish used is a very important factor: use only fish of good quality.



Fillet the fish and remove the skin. Wash the fillets several times with clean, cold water and drain. If the fillets are thick—one inch or thicker—they should be sliced to pieces about ½-inch thick.

FILLET CHUNKS

Use the process described above for pickled fillets. After the fillets have been washed, cut each fillet into chunks about 1% to 2 inches in length.



CHUNK STYLE

Chunk-style pickling should only be used with fish with a small bone structure and thin skin—the so-called soft-fleshed fish. Trout, salmon, catfish and similar fish species are not suitable for making this type of product because of their thick, tough skin and heavy bones.

To prepare the fish, remove the scales, head, fins and tail. Wash the fish thoroughly in cold water to remove blood, kidney and any visceral material that may remain on the fish surface or in the belly cavity. Cut the cleaned fish into chunks about 1½ inches wide.

2. Brining the Fish

Use a container made of plastic, glass or some other material not affected by salt. Don't use metal containers—salt is corrosive and reacts with various metals.

For each 5 pounds of fish dissolve 2½ cups of pickling or canning salt in 1 gallon of water. Place the prepared raw fish in the brine and refrigerate for 12-24 hours. Then rinse the brined fish in cold water and cover with undiluted distilled vinegar, and refrigerate it for another 24 hours. The vinegar soaking further firms the flesh and softens the bones.

After 24 hours, remove the fish from the vinegar and pack it loosely in clean, sterilized half-pint or pint jars with chopped onion on the bottom and on the top. Cover with one of the following pickling solutions.

A Note of Caution

Some people think that pickled fish can be preserved for longer periods of time if they heat-process the jars in a boiling water bath or use a pressure canner. But boiling water bath or pressure canning of a high-acid and high-sugar product like pickled fish will result in a caramelized, soft-textured and potentially bitter final product. Heat-processing pickled fish is not recommended.

3. Pickling the Fish

Pickling Solution

(Treats 10 pounds of fish)

- 1/4 oz bay leaves
- 2 tablespoons allspice
- 2 tablespoons mustard seed
- 1 tablespoons whole cloves
- 1 tablespoons pepper
- 1-2 tablespoons hot, ground dried pepper
- 1/2 lb sliced onion
- 2 quarts distilled vinegar
- 5 cups water.

Combine all ingredients in a large kettle, and bring to a boil. Add fish, and simmer for 10 minutes until fish is easily pierced with a fork. Do not overcook. Remove fish from liquid and place in single layer in shallow pan and refrigerate. Once they have cooled, pack cold fish in clean glass jars. Add fresh onion slices, lemon and bay leaves if desired. Strain the vinegar solution, bring it to a boil and pour into jars to cover fish. Seal immediately. Pickled fish must be stored in the refrigerator and consumed within 6 weeks.



Used with permission from the University of Minnesota Extension. www1.extension.umn.edu/food/food-safety/ preserving/meat-fish/pickled-fish/

Related Sea Grant Publications

"Home Smoking of Fish" by David Stuiber, Mary E. Mennes and C. E. Johnson. Wisconsin Sea Grant publication. Madison: University of Wisconsin, updated 2014 by Suzanne Driessen.

"Home Freezing of Fish" by David A. Stuiber. Wisconsin Sea Grant publication. Madison: University of Wisconsin, updated 2014 by Suzanne Driessen. "Home Canning of Fish" by David Stuiber and Mary E. Mennes. Wisconsin Sea Grant publication. Madison: University of Wisconsin, updated 2014 by Suzanne Driessen.

Source

University of Minnesota Extension www1.extension. umn.edu/food/food-safety/preserving/meat-fish/ pickled-fish/

August 2014, WISCU-G-14-013. Originally authored by David A. Stuiber and Mary E. Mennes, Department of Food Science, University of Wisconsin-Madison.

