

## RECIPES FOR CANNING FISH & SHELLFISH IN TIN CANS\*

\*Courtesy of University of Alaska Cooperative Extension  
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CARE FOR THE CATCH - If you don't know how to dress fish, learn! Practice handling fish quickly and correctly. Fish and shellfish are very perishable. Keep them cold from the time they come out of the water until you begin processing them. If ice is not available for cooling, gut and sprinkle the cavity with salt. Fish caught while feeding will soon become soft and flabby unless cleaned quickly. This is especially true of troll-caught salmon. Fresh water fish have softer flesh than salt water fish, but they, too, can be preserved if handled properly.

HANDLING THE CATCH - Don't let the fish flop around any more than necessary, they bruise easily. Remove the guts and gills immediately and bleed the fish. Hang large fish by the tail to improve bleeding. This delays spoilage and improves color. Don't expose the fish to sunlight any more than necessary. Keep as cool as possible. Even if cleaned when caught, fish require further cleaning and washing before preserving. Pull the fins off, scrape the fish until it is free of slime and blood, cut off the head and tail and clean any remaining bits of viscera or membranes from the belly cavity. Scaling can be made easy by using a quick dip in boiling water. It also helps remove the slime, but you must be careful not to cook the fish. If you do not use hot water, after scaling you can remove the slime by washing in a vinegar-water bath of one part vinegar to three or four parts water. This should be followed by a rinse of clean water.

PRESERVING - When planning to preserve fish or shellfish:

1. Get suitable containers and equipment ready ahead of time.
2. Preserve only the best quality, absolutely fresh fish and shellfish.
3. Prepare only a canner load at a time.
4. Work fast and follow the directions.
5. Store in a suitable place.
6. Use fish continually from this supply. Don't let it get too old.

GENERAL DIRECTIONS FOR THE PRESSURE CANNER - Follow the manufacturer's directions for the use of your pressure canner. If you have no directions, here are a few pointers:

1. Put 2 or 3 inches of water in the bottom of the canner.
2. Set cans on a rack. Do not let them touch each other, the sides, or bottom of the canner. Cans stacked on top of each other should be staggered so steam can flow around each can.
3. Fasten the cover securely so no steam escapes except through the open petcock. Watch the canner until steam pours steadily from the opening. Let it escape for 10 minutes so that all the air is driven from the canner. Then close the petcock or put on the weighted gauge. The moment the right pressure is reached, start counting the time. Process for the time given in the directions for canning the product.
4. Keep pressure constant by regulating the heat under the canner. Keep drafts from blowing on it. When time is up, slide the canner away from the heat.
5. Release steam in canner as soon as the processing time is up. Open the petcock or remove the weighted gauge. After pressure reaches zero, wait one minute and then unfasten the cover and tilt it away from you to let steam escape. Cool tins in cold, clean water, changing the water as it gets warm. Take the cans from the cold water while still a little warm and they will dry themselves. Label and store in a dry place.

CRABS - Put live crabs in ice water for 2 minutes. Kill with knife. Remove claws and legs. Remove back shell by putting fingers into leg holes and pulling apart. Remove viscera and wash carefully in several waters. Bring to a boil a large preserving kettle of water to which 1/4 cup of vinegar and one cup of salt per gallon have been added. A few whole black peppers and bay leaves may be added for seasoning, depending upon individual preference. Boil the crabs for about 20 minutes, counting from time water again begins to boil after the crabs have been put in it. Pick meat out of shells as soon as possible after cooking. In picking, break claw and leg shells with a small mallet and peel off the broken pieces, taking care not to break the meat unnecessarily. Cut body in two with a sharp knife, as if slicing a bun, and pound shell against pan in which meat is to be picked. This loosens and releases the meat without breaking it into small pieces. The body and leg meat are about equal in quantity and should be kept separate. Immerse picked meat for one minute in a brine made of one cup of salt to each gallon of water. Then dip in a mixture of one cup vinegar to one gallon water. Press the meat with the hands to remove extra moisture.

In C-enamel Tins--Half pound flat or No. 2 C-enamel lined cans may be used, and the usual practice is to put in a lining of vegetable parchment paper as additional protection. In filling, place a layer of leg meat on top. Exhaust until center of can reaches 170° F. Seal and process.

TIME TO PROCESS: 1/2 Pound flat tins, 307x200.25..... 70 minutes at 10 pounds  
No. 2 tins..... 80 minutes at 10 pounds

HALIBUT, GRAY COD, ROCK FISH, LARGE FLOUNDER OR SOLE - Fillet fish and remove the dark, fatty portions. Cut the fillets into can size pieces. Prepare brine of 1-1/3 cups salt to one gallon water. Add the cut pieces to the brine solution and soak for 10 minutes. Remove and drain for five minutes. Pack tightly in containers, leaving 1/4 inch headspace.

In C-enamel Tin Cans. Place the open containers in the pressure canner and exhaust until center of can reaches 170° F. Drain off the liquid and add: 2 tablespoons oil (any salad oil) to each No. 2 can or 1 tablespoon oil to each half-pound flat tin. Seal the cans at once and process.

TIME TO PROCESS: 1/2 Pound flat tins, 307x200.25..... 75 minutes at 10 pounds  
No. 2 tins..... 90 minutes at 10 pounds

HALIBUT CHEEKS CANNED IN JELLY - Get the halibut cheeks from selected halibut. Avoid those that have been gaffed, bruised or clubbed. The coagulated blood will spoil the delicate flavor. Fresh halibut cheeks are best, but selected frozen cheeks can be canned if they have been carefully frozen without darkening.

Can in half-pound flat C-enamel cans. Prepare halibut cheeks as for canned fillets of halibut. After draining off hot liquid, add 1 ounce (2 tablespoons) jelly solution\*, sufficiently hot to run through the fish. Exhaust, seal and process as for other canned halibut.

\*Jelly solution: 1-1/4 teaspoons powdered agar-agar (obtained from the drug store) and 8 level teaspoons plain gelatin dissolved in 1 cup hot water.

OYSTERS - Wash absolutely fresh oysters. Place in metal baskets or pans and steam in pressure cooker for 5 minutes at 10 pounds pressure or in a non-pressure steamer for 15 minutes. Shuck meats immediately into a salt solution (2 tablespoons salt per quart of water) to prevent darkening. Drain 5 minutes.

If oysters are opened by hand, save liquid, wash meat well in plenty of water or brine so sand or grit is removed. A wire basket for oysters makes it possible to lift oysters out easily and sand sinks to the bottom of the container.

In C-enamel tin cans. Drain oyster meats and fill into containers. Weigh amounts if possible: 16 ounces or 2 cups for No. 2 can. Add brine (2 tablespoons salt per quart of water). Exhaust until center of can reaches 170° F., seal and process.

TIME TO PROCESS: 1/2 Pound flat tins, 307x200.25..... 29 minutes at 10 pounds  
No. 2 tins..... 42 minutes at 10 pounds

SPICED FISH - Salmon shad, mackerel, trout or lake trout may be used. Scrape off all scales, remove fins and heads, clean and wash fish thoroughly, but do not take out backbones. Cut cleaned fish into can-length pieces and soak these in brine, in the proportion of 1/2 pound of salt to 1 gallon of water for 1 hour. Drain fish for about 10 minutes.

#### Vinegar Sauce

|                          |                            |                               |
|--------------------------|----------------------------|-------------------------------|
| 2 quarts vinegar         | 1/4 oz. whole white pepper | 1/8 oz. cracked cardamon seed |
| 1 quart water            | 1/4 oz. mustard seed       | 1/8 oz. bay leaves            |
| 2 ounces (1/4 cup) sugar | 1/4 oz. whole cloves       | 1/8 oz. cracked whole ginger  |

Add sugar and water to vinegar. Tie spices loosely in cheesecloth and simmer in vinegar solution for 1 hour. Strain.

Fill containers, but pack rather loosely and add 1/2 strength vinegar sauce. Exhaust by cooking in open can for 20 minutes. Invert the containers on a wire screen and drain for about 3 minutes. Right the containers and add a slice or two of raw onion, a bay leaf, a few mixed spices and enough fresh vinegar sauce, full strength, to cover fish. One tablespoon olive oil may be added, if desired.

In Plain tin cans--Pack and exhaust until center of can reaches 170° F. Seal and process.

TIME TO PROCESS: 1/2 Pound plain tin, 307x200.25..... 80 minutes at 10 pounds

TROUT, SMELT AND PERCH - Remove scales, fins and head. Clean and wash thoroughly. If large, cut in slices. Pack vertically. Add salt, but no water.

In C-enamel tin cans--Exhaust until center of can reaches 170° F. Seal and process.

TIME TO PROCESS: No. 2 tins..... 90 minutes at 10 pounds

TUNA - Clean fish thoroughly, scraping off all scales and slime and remove intestines. Cut away strips of thin belly 1/2 to 3/4 inch wide and discard. Wash and drain. Cut as necessary to place in perforated pans. Steam in pressure cooker 2 hours at 10 pounds. Cool several hours or overnight. Scrape away skin with knife edge, lift out backbone, cut away streaks of dark flesh along sides. Cut white meat in sections 3/4 inch shorter than length of container. Put 1 teaspoon salt in each container. Pack with meat. Add 2 tablespoons olive oil or cottonseed oil.

1/2 Pound flat tin cans recommended only.

In C-enamel tin cans--Pack and exhaust until center of can reaches 170° F. Seal & process.

TIME TO PROCESS: 1/2 Pound flat tins, 307x200.25..... 70 minutes at 15 pounds

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SALMON - Remove scales, fins and head. Clean and wash thoroughly. Leave backbone. Cut into can-length pieces. Soak in brine (1 cup salt to 1 gallon water) for one hour. This will do for 25 pounds of salmon. Drain for several minutes and fill container. Pack solidly but do not crush.

In C-enamel tin cans--Exhaust until center of can reaches 170° F. Seal and process immediately.

TIME TO PROCESS: 1/2 Pound flat tins, 307x200.25..... 90 minutes at 10 pounds  
No. 1 Tall salmon can, 301x408.....110 minutes at 10 pounds  
No. 2 C-enamel tins.....135 minutes at 10 pounds

SMOKED SALMON- Smoking followed by canning is a favorite method of preserving salmon. Fillet salmon, soak in a brine solution (2/3 cup salt per gallon water). Most people do not like too strong a smoke flavor and since canning intensifies the smoke flavor, salmon fillets for canning should be cold-smoked only 2 to 3 hours or until light brown.

The fillets are then cut in can lengths, packed in the can, exhausted, sealed and processed the same as fresh salmon. It is recommended that smoked salmon be canned in C-enamel (seafood formula) cans. The cans should be cooled well in air before storing.

TIME TO PROCESS: 1/2 Pound C-enamel flat tins, 307x200.25.....90 minutes at 10 pounds  
No. 1 Tall salmon can, 301x408.....110 minutes at 10 pounds  
No. 2 C-enamel tins.....135 minutes at 10 pounds

If a stronger smoke flavor is desired, salmon can be hot-smoked or kippered until a golden brown. The fillets may then be sliced, packed in the can and covered with a small amount of vegetable oil, such as cottonseed or soy bean oil. Even though the salmon are actually cooked before canning, the full process time for sterilization must be used for shelf storage at room temperature. Only then can the housewife be sure that no harmful bacteria (botulinus) is present.

SHRIMP - Plan to pack only near the place where shrimp are taken. They spoil very quickly. Head as soon as removed from water. Sand vein or black streak comes off with head if done within 30 minutes. Pack in fine ice as headed to make shell removal easy and to keep shrimp. Wash thoroughly, sort for freshness and peel. Discard strong smelling, bloody and flat-colored shrimp. Wash in fresh water. Place not more than 35 pounds of meats in galvanized metal container and cover with cold brine (1/2 cup salt to 1 quart water) for from 20 to 30 minutes, depending upon their size. Stir shrimp occasionally so brining will be uniform. Drain meats and place in wire baskets of type used for deep fat frying. The basket should be not more than half full. Fill a large preserving kettle with brine in proportions given above. Bring brine to a boil and lower basket of shrimp meat into it. Cook for 6 to 8 minutes, counting time from when brine again begins to boil after shrimp have been put in.

Brine can be reused, but it will be necessary to add salt in the proportion of 1 table-spoon to each quart of brine after each batch is blanched. The brine should be discarded entirely and replaced by a fresh lot after each five batches; otherwise the canned shrimp will be ragged and the liquid in which they are canned will be "ropy".

Spread blanched shrimp on a wire-mesh screen, tray or rack to dry and cool. An electric fan shortens cooling time. Bits of shell and whiskers missed in peeling and washing may be removed at this time. Meats must be cool and show no traces of surface moisture before filling into containers. 1-1/2 cups in No. 2 can.

Fill containers with scalding brine (1-1/2 tablespoons salt to 1 quart water) and seal immediately.

In C-enamel Seafood Formula, or Plain Tins with Parchment--Pack and process immediately.

TIME TO PROCESS: No. 2 tins..... 30 minutes at 10 pounds

## ADJUSTING FOR VARIOUS CAN SIZES

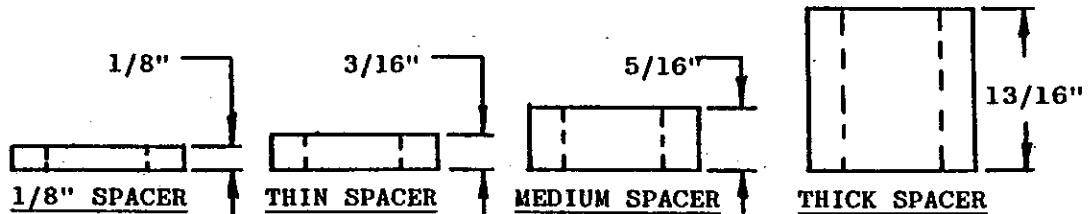
When setting up your sealer for the can size that you want to seal:

1. Unscrew the seaming roller screws with the pin and screw them finger tight into the proper hole in the 3-hole nuts (Fig. #2 and Table I below). Loosen the thumb screws and slide the 3-hole nuts out as far as they will go in the slotted frame in which they are mounted.
2. Install the correct chuck on the sealer head (Fig. #4) and use the proper spacer or spacers under the turntable as shown in Table I.

TABLE I

|                                                        | #1 Cans<br>(211x400) | #2 Cans<br>(307x409) | #2½ Cans<br>(401x411) | #3 Cans<br>(404x414) | #300 Cans<br>(300x407) | #303 Cans<br>(303x406) |
|--------------------------------------------------------|----------------------|----------------------|-----------------------|----------------------|------------------------|------------------------|
| Chuck Size                                             | 211                  | 307                  | 401                   | 404                  | 300                    | 303                    |
| Spacers Required                                       | 1-Thick              | 1-Medium             | 1-Thin                | None                 | 1-Medium<br>1- 1/8"    | 1-Medium<br>1-Thin     |
| Position of Seaming<br>Roller Screws in<br>3-Hole Nuts | #1 Hole              | #2 Hole              | #2½-3 Hole            | #2½-3 Hole           | #2 Hole                | #2 Hole                |

### S P A C E R   H E I G H T



3. Adjust the seaming rollers (Fig. #1, 2 and 3).

4. Before sealing cans, make sure that the correct size and number of spacers are used for the can size being sealed (See Table I above).

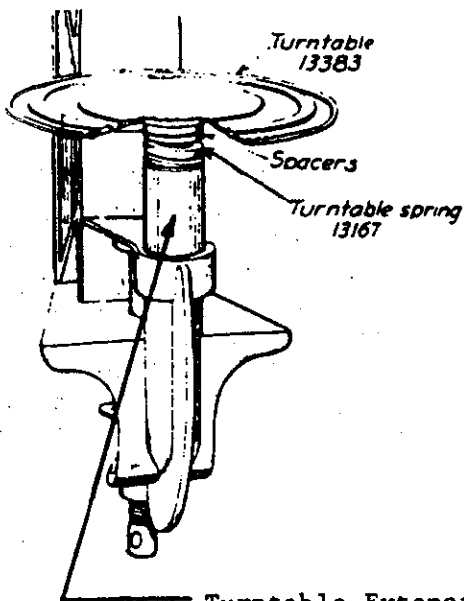
### LEAK TESTING

Before canning, seal several empty cans until you learn how the sealer works. These empty cans should then be checked for leakage by placing them in a pan of water that has been brought to a boil and then removed from the stove. The water should be deep enough to cover about 1/2 of the can when the cans are standing upright. Insert the cans upside down (newly-sealed end down) in the hot water. Hold each can down with a larger-size filled can from your pantry or with a pot holder. The heat will expand the air in the can and within a few seconds a stream of bubbles will be seen coming from a leaky seam. Small bubbles clinging to the seam do not indicate leakage. The ends of the cans might "pop" when the can is put into the hot water, but this is normal and should cause no concern. If a leaky seam is detected, readjust the seaming rollers and repeat the leakage test. Canning should not proceed until the seaming rollers have been adjusted properly and the seams do not produce a stream of bubbles in the leakage test. The rollers may loosen because of newness, so on new sealers, repeat the leakage test after sealing the first dozen cans.

### CHUCKS AND SPACERS

In addition to the parts shown in the parts list, the table below shows the number of chucks and spacers included with the model number shown.

| Model No. | #211 Chuck<br>Part # A13152 | #307 Chuck<br>Part # B13152 | #401 Chuck<br>Part # C13152 | #404 Chuck<br>Part # D13152 | #301 Chuck<br>Part # S13152 | #303 Chuck<br>Part # E13152 | Thin Spacer<br>Part # D13164 | Medium Spacer<br>Part # A13171 | Thick Spacer<br>Part # B13171 | Turntable Extension<br>Part # 18102 |
|-----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|--------------------------------|-------------------------------|-------------------------------------|
| 100       |                             |                             |                             |                             | 1                           |                             | 2                            |                                |                               |                                     |
| 200       | 1                           | 1                           | 1                           | 1                           |                             |                             | 1                            | 1                              | 1                             |                                     |
| 300       |                             | 1                           |                             | 1                           |                             |                             |                              | 1                              |                               |                                     |
| 400       |                             | 1                           | 1                           |                             | 1                           |                             | 3                            | 1                              |                               | 1                                   |
| 500       | 1                           | 1                           | 1                           | 1                           | 1                           |                             | 3                            | 1                              | 1                             | 1                                   |
| 600       |                             | 1                           |                             | 1                           |                             |                             | 3                            | 1                              |                               | 1                                   |
| 700       |                             | 1                           | 1                           |                             |                             |                             | 1                            | 1                              |                               |                                     |



Turntable Extension #18102-A

### INSTRUCTIONS FOR FISH CANS

The tables below show the chuck size, number of spacers and the position of the seaming roller screws for various sizes of cans. If the chuck must be replaced, first remove the existing chuck (see instruction sheet for procedure). Then reposition the seaming roller screws, but do not tighten yet. Loosen the thumb screws and slide the 3-hole nuts out as far as they will go. Tighten the seaming roller screws by hand only, then install the correct size chuck. Adjust seaming rollers as shown in your instruction sheet.

### INSTRUCTIONS FOR FLAT FISH CANS

For these cans the turntable extension shown above is used between the frame and turntable. Use following table to determine the number of spacers, chuck size and seaming roller location:

| CAN SIZE<br>DIAMETER X HEIGHT | CAN<br>INDUSTRY<br>SIZE | NUMBER AND<br>SIZE<br>OF SPACERS | CHUCK SIZE    | POSITION OF SEAMING<br>ROLLER SCREWS IN<br>3-HOLE NUTS |
|-------------------------------|-------------------------|----------------------------------|---------------|--------------------------------------------------------|
| 3 7/16 x 2                    | 307x200                 | 2-3/16"<br>1-5/16"               | #2<br>307     |                                                        |
| 4 1/16 x 2 5/16               | 401x205                 | 2-3/16"                          | #2 1/2<br>401 | #2 1/2 Hole                                            |
| 4 1/16 x 2 11/16              | 401x211                 | None                             |               |                                                        |
| 4 1/4 x 2 3/8                 | 404x206                 | 1-5/16"                          | #3<br>404     | #3 Hole                                                |

### INSTRUCTIONS FOR TALL SALMON CANS

The turntable extension is NOT required for this can. Use the following table to determine the number of spacers, chuck size and seaming roller location:

| CAN SIZE<br>DIAMETER X HEIGHT | CAN<br>INDUSTRY<br>SIZE | NUMBER AND<br>SIZE<br>OF SPACERS | CHUCK SIZE | POSITION OF SEAMING<br>ROLLER SCREWS IN<br>3-HOLE NUTS |
|-------------------------------|-------------------------|----------------------------------|------------|--------------------------------------------------------|
| 3 1/16 x 4 8/16               | 301x408                 | 2-3/16"                          | #301       | #2 Hole                                                |