Claking Causages at







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Making Sausages at Home

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Making sausages can be an enjoyable hobby and can provide a wealth of good eating. This publication gives you basic instruction in sausage preparation and provides several recipes that have been tried for safety, ease of preparation, taste and sound nutrition.

Sausages come in a variety of shapes, sizes and tastes — more than 200 different varieties. Most of these come from the folklore of history only to be refined for your selection at the supermarket.

An important meat item in the American diet, the sausage is 100 percent edible and easy to prepare. Currently about 15 percent of total U.S. meat production goes into sausage manufacture. The common "hot dog" is the most popular sausage produced, accounting for one-quarter of the sausage market.

Making sausages is one of the oldest forms of food processing for preservation for future use. A few of the sausages we know today still retain the names of their origin such as Frankfurter and Bologna. National tastes and climate have created many of the types we now commonly use. Some are dried and some fresh, but all sausages add to our common well-being, providing good eating and sound nutrition.

Since most sausages are a combination of ground meats and spices, each manufacturer adds his own special style to the making of sausage. Many basic sausage recipes are included in this publication.

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After you have tried these, don't be afraid to alter the spices or other ingredients to suit your own taste. Since individual preferences in sausage are widely varied, a good sausage maker will experiment with the basic recipe until it pleases his family's individual taste.

Type of Sausage

The way a sausage is processed results in the type of sausage it becomes. Sausages are grouped into two broad categories — fresh sausage and cooked sausage.

Fresh sausages are not cooked during processing. They are simply ground, mixed and stored, either briefly in a refrigerator or immediately frozen for longer storage. Examples of fresh sausages include fresh pork sausage, Italian sausage and some types of Bratwurst.

Cooked sausages are heated to an internal temperature of 155°F during processing. They can either be simmered in water or cooked at a higher temperature during smoking. Storage is in the refrigerator or freezer. These sausages can be eaten without heating, but many are heated before serving to enhance their flavor. Examples include hot dogs, bologna, salami, pepperoni and headcheese.

Steps in Making Sausage

The several basic steps in making sausage are almost always the same. Once you become familiar with the procedures and terms, you should be able to make any sausage recipe. You may even find a recipe for sausage made in a commercial sausage kitchen and convert it to home procedures.

Measuring

With any recipe, you are working with a formula, and it's important to follow it exactly the first time. Weigh meat with an accurate scale. If you don't have a kitchen scale, buy one; it doesn't pay to guess. Many recipes call for 1 or 2 pounds of a certain ingredient. A good scale will accurately weigh to ½ pound or 227 grams.

The quantities of spices and salts for small amounts of sausage are given in ounces or grams. Since accurately weighing small quantities is difficult, convert these weights to volume measurements such as teaspoons, tablespoons, milliliters, etc. The recipes in this publication give volume measurements, and unless otherwise specified, these volume measurements are always level.

Other recipes you may come across, especially commercial recipes or recipes for large amounts of sausage, may give measurements for spices and condiments by weight. To reduce such a recipe for a smaller batch, try dividing everything by 10 or 20. You may have trouble, though, weighing 1/10th or 1/20th of an ounce depending on your scale.

A spice chart (Table 1) lists equivalent weights and volume measures of most common spices and condiments. The chart will help you convert 1/20th of an ounce of ground sage (a weight measurement) to 1 level teaspoon (a volume measurement).

Grinding

Meat should be kept as cold as possible during the grinding process. Keep the meat refrigerated until you're ready to grind, and then grind it as quickly as possible. The friction in most grinders causes them to heat up, causing the meat to heat also. Small chips of ice may be added to the grinding process to help keep the meat cool.

Use as nearly the correct size grinding plate as you can. Some sausages are ground twice or even three times with the spices or condiments mixed between grindings. If the recipe calls for two or more distinctly different meats, always grind them in the order given. You should usually grind pork last.

Mixing

Commercial sausage kitchens use large, mechanical mixers to combine and mix ingredients. The best thing a home sausage maker can use is his hands. Be sure your hands and fingernails are very clean before you start to mix. You may find sterile, plastic gloves helpful since they keep your hands free of grease and fat during the mixing.

Mixing sausage is much the same as kneading bread; you'll find it about the same consistency. Don't stop mixing too soon. Spices must be thoroughly mixed and be consistent throughout.

Stuffing

Whether you use an old plunger type of stuffer or a new electric grinder with a stuffer attachment, the stuffing process is the same:

 Put the meat into the hopper and tamp it down to remove air pockets.

Table 1. Weights of volume measurements in ounces or grams.

	English	Metric
1	teaspoon measure will weigh	5 milliliter measure will weigh
THE REPORT	(ounces)	(grams)
White sugar	.15	4.3
Brown sugar (packed	.18	5.0
Salt	.17	4.8
Garlic salt	.20	5.6
Saltpeter	.14	4.0
Tender-quick	.16	4.5
MSG	.13	3.6
Pepper		
Ground black	.07	2.0
Ground white	.09	2.4
Coarse ground black		2.2
Cracked black	.09	2.4
Ground red	.08	2.2
Crushed red	.05	1.4
Flour (white)	.10	2,9
Coriander (ground	.06	1.6
Garlic powder	.12	3.3
Mustard seed	.11	3.2
Sage (ground)	.05	1.5
Mace (ground)	.06	1.7
Cumin (ground)	.09	2.5
Cloves (ground)	.07	1.9
Marjoram (ground	.06	1.6
Paprika	.09	2.4
Ginger	.08	2.1
Nutmeg (ground)	.08	2.3
Fennel seed	.08	2.3

- After flushing natural casings with water or soaking synthetic casings, place the open end of the casing onto the nozzle.
- 3. Slide the length of casing onto the nozzle much the same way as you would pull on a sock.
- 4. Start pressing the sausage through the stuffer until it reaches the end of the nozzle.
- 5. Pull a length of casing off the nozzle; tie a knot or tie a piece of twine around it.
- 6. Begin pushing the meat out into the casing until the casing is filled to its full length.
- Measure link sizes, press the casing together and twist it several times around.

For easier handling of the product, you may want to link as you go. If you alternate direction of the twist as you link the sausage, the sausages will remain linked. For ring sausage, you could use casings 18 to 24 inches long. Synthetic casings are best linked by tying with small pieces of string. Air pockets which form inside the casings as you stuff them can be punctured with a sharp needle and the air pressed out.

Smoking

Sausages are smoked for flavor, color and preservation. When hanging the sausages in the smoker, leave enough space so the sausages don't touch each other. Keep the temperature of the smoker consistent with the recipe's directions. Cool smoking is usually from 70° to 110°F. A temperature between 120° and 140°F is considered a hot smoke.

Sausage Ingredients

Meat is probably the most important and the most expensive ingredient used in sausage. If you use your own animal for slaughter, make sure your equipment is very clean, and use the meat when it is very fresh. If you buy meat from a local slaughter house, make sure it is fresh. If you purchase your meat from the local butcher or grocery outlet, shop around for someone who will sell pork trimmings (excess fat and meat trimmed from lean cuts) and beef trimmings at the best price. When you are making a 10-pound recipe, a difference of 20¢ a pound can mean a \$2 savings.

Salt is the most important nonmeat ingredient in sausage. It enhances the flavor and aids in preserving the sausage. The amount of salt used can be adjusted according to your taste. Common, non-iodized table salt is usually used.

Nitrites are curing ingredients that have been used for years to inhibit the growth of microorganisms such as those causing botulism. Nitrites also develop the typical pink color of cured meats and give sausge a distinct flavor. Potassium nitrate (saltpeter) has been historically the salt used for curing meats.

Such small quantities must be used that you need to be extremely careful in adding nitrite or nitrate to sausage. Overdoses can be very toxic. Since small quantities are difficult to weigh accurately on a home scale, you should use a commercial premix cure. Premixes come with the nitrite diluted with salt, sugar or another carrier so that the quantities are large enough to measure at home. If you don't use a premix, be sure to measure nitrite ingredients accurately.

Spices are used to flavor the meat product in many kinds of sausage. The whole concept of making sausage revolves around the spice world. Peppers, sage, nutmeg, allspice, mustard and others are the key ingredients to good tasting sausage. You can buy the amounts of spice you need for homemade sausages at your local food store. Be sure to use the spice in the form called for in the recipe because some forms are stronger than others.

Condiments and extenders are terms used in many recipes and refer to sugars, dry milk, flour or soy protein. They can all be purchased at your local grocery store. Extenders are an important part of some recipes, giving them a more desirable texture and adding important nutrients.



Fig. 1. Typical spices used in home sausage making.

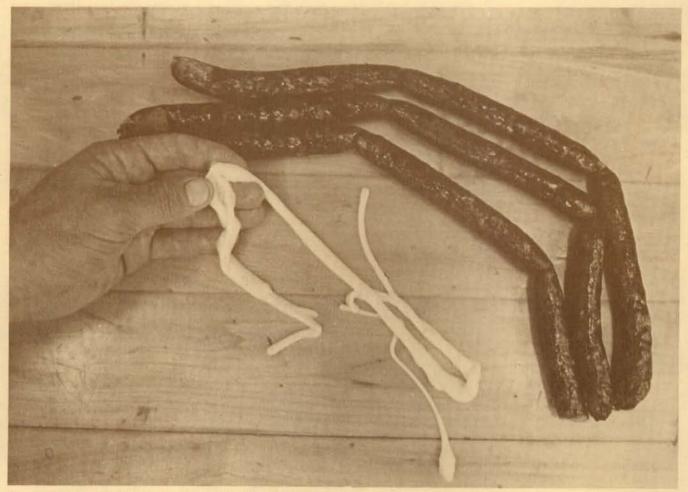


Fig. 2. Natural hog casings are available to the homemaker.

Casings are available as natural casings or as synthetic, fibrous casings. You can buy casings from a local meat processing plant or special order them from your local butcher.

Natural hog casings will be the easiest to obtain. They are sold by the hank, enough to stuff 120 pounds of sausages. They come packed in salt and must be flushed with water before use. The unused portion can be stored indefinitely in the freezer.

Synthetic, fibrous casings come in varying diameters and may be harder to find. You may need to make several phone calls to find someone who can order them for you or who has them for resale. Many local packers may have them but cannot sell them because their trademarks are stamped on the outside.

If you can't find any large synthetic casings, you can use a homemade muslin casing as a substitute. You can make this from a long, narrow (6 inches wide for a medium casing or 12 inches wide for a large casing) strip of muslin with a ¼-inch seam stitched in one side and one end. Be sure to dampen the muslin casing before stuffing.



Fig. 3. Other sausage casing available include, from left, large reconstituted collagen casings, natural sheep casings, cellophane casings and small reconstituted collagen casings.

Equipment Needs

Grinders

Small or large, manual or power-driven grinders can be purchased from hardware or appliance stores or secondhand. You should have at least two sizes of grinding plates — coarse and fine. Of course, the bigger your grinder, the easier the job of grinding your meat. If you must purchase a grinder, get the biggest and best you can afford.

Commercially prepared sausages with very fine textures, such as bologna or frankfurters, are usually ground in a device called a "silent cutter." The cost of a silent cutter will be prohibitive for the average homemaker. You can use a food processor instead, but you have to be careful not to over chop the meat. A food processor will not emulsify the meat as a silent cutter does, and you will get a coarser texture. This coarser texture does not seem objectionable.

Thermometer

If you don't have a good thermometer for cooking purposes, buy one. Use of a good thermometer is critical to your family's safety.

Stuffers

Most grinders have sausage stuffer attachments available with them. These are probably the easiest stuffers to use at home. If you are lucky, you may have access to an old stuffer with a screw plate or a plunger type of plate. Both of these kinds of stuffers will produce continuous and uniform pressure for the stuffing process.

If you don't have a mechanical stuffer, a large funnel is slow but sure. You can force the meat through the funnel with pressure from your hand.

Scales

A reasonably accurate scale is one that weighs to the half pound (227 grams). Meat should always be weighed. Some spices and condiments are also added by weight measurement.

Smokers

Making a smokehouse is easy and takes a minimum of material. A smokehouse is usually made of wood with metal oven racks and a tin heat deflector to keep the meat from scorching. You don't need precise plans for a smoker. Improvise as you go along, and make the smoker to your own specifications. For instance, adjust the width of the smoker to fit your set of oven racks. The bigger or taller the smoker, the more sausage it will accommodate. (None of the sausage in the smoker should be touching because this prevents even smoking and causes irregular color.) The rule of thumb on smokers is to be sure you can maintain temperature in relation to the size of the smoker.

An alternative is to convert an old icebox or refrigerator into a smoker. You can do this with little work or expense. For children's safety, break the door handle or latch. The door can easily be propped shut with a board. Do not use the refrigerator racks inside the smoker since they aren't made to withstand heat.

In the refrigerator-type smoker, run a 1-inch water pipe through a hole in the top for a chimney. If the refrigerator is old and the rubber insulation is in poor condition, smoke will escape around the door as well as up the chimney. An inch of clean sand in the bottom of the refrigerator smoker will make cleaning easier.

Use an electric hot plate as a heat source in the smoker. The larger the hot plate, the faster it will work. Place sawdust or wood chips in an old frying pan or container on the heater. Use a coaster between the hot plate and pan because direct heat could melt the pan if it's cast iron. The hot plate used should have a low setting. Make a metal heat deflector to fit over the hot plate and pan. To keep track of temperature, drill a hole in the side one-third the way down from the top and insert a meat thermometer.

Oak, apple, hickory, cottonwood or corn cobs are good fuels for smoking. Do not use pine, fir or other coniferous woods. They deposit resin and soot and may give the food an off-flavor. The type of wood you choose gives the meat its distinctive flavor. Wood chips and sawdust can be bought commercially. Wet sawdust will provide a denser smoke.

Place sawdust or wood chips in the frying pan as soon as the hot plate is started. With experience, you will learn how often you need to replenish the fuel and how much smoke you want on your meat. Keep the smoke flowing slowly through the box. Remember that dense smoke is unnecessary. The right temperature is all important.



Fig. 4. Homemakers should inspect all smoked and cooked sausage for color, uniformity and eating quality.

Sausage Storage

The way your sausage is processed will help determine the best way to store it. Treat fresh sausage as fresh meat and refrigerate it no more than 3 to 5 days. Smoked, cooked or cured sausage will last a little longer under refrigeration but should not be kept more than 5 to 7 days in the refrigerator.

Freezing is an excellent way to preserve sausage. Freeze sausage wrapped in a moisture-proof freezer wrap or freezer bags. It should be frozen as quickly as possible and then kept at about 0°F. For best quality, the USDA recommended storage time for all frozen ground meat, including sausage, is 2 to 4 months. If sausage is to be stored frozen for the maximum recommended time, do not use salt in the

sausage making process. You can add salt when you are preparing the sausage for cooking. Salt hastens the development of rancidity.

You may can sausage if you don't have freezing facilities. When you make your sausage, use less seasonings than you would otherwise, and completely omit the sage because it turns bitter in canning. Shape raw sausage into patties, brown them in a pan and skim off all the fat. Pack the pre-cooked sausage patties in layers in the jars leaving I inch of headroom. Cover the sausage with fat-free meat broth. Process the jars at 10 pounds pressure. Allow 75 minutes for pint jars and 90 minutes for quart jars. Remove the jars from the canner.

The Spice Table

A teaspoon of sage does not weigh as much as a teaspoon of salt. Table 1 gives the weights of a teaspoon of different spices. Convert either to ounces or grams in a recipe.

For example, let's assume your recipe calls for 10 ounces of salt. Use the following equation to convert this weight to a volume measurement (teaspoons):

number of teaspoons =

weight in ounces in recipe weight of 1 tsp. ingredient number of teaspoons of salt =

10 (ounces in recipe) .17 (the wt. of one tsp. salt)

To measure 58.82 teaspoons of salt is a chore. Each tablespoon has 3 teaspoons. Dividing 58.82 by 3 equals 19.61 tablespoons. To be safe, don't round up. Use 19½ tablespoons in this example.

Again, be very careful when measuring nitrate or saltpeter. Also, try to use the recipes with premixes instead of measuring saltpeter yourself.

Fresh Sausage Recipes

Fresh Country Sausages

On a bright morning, nothing awakens the taste buds more than the spicy aroma of sausage sizzling in the pan. These fresh sausage recipes can be made in small quantities and stored for a short time (3 days) in the refrigerator or made in 100 pound batches and freezer wrapped and stored 2 to 4 months.

Good 'n' Sagey

A good, mild sausage with a definite taste of sage. Excellent choice for use in main dishes.

Pork trimmings	4	Ib	1.8	kg	100	lb
Salt	5	tsp	25	ml	21	oz
Sage	4	tsp	20	ml	5	OZ
Ground black pepper	2	tsp	10	ml	31/2	oz
Ground cloves	1/2	tsp	2.5	ml	1	OZ.
or Ground nutmeg	1	tsp	5	ml	2	OZ.
Sugar	1	tsp	5	ml	33/4	oz

Grind the pork trimmings through a medium grinding plate. Sprinkle seasonings onto meat and mix thoroughly. May be cooked immediately or packaged in freezer wrap and frozen.

Old Fashioned Sausage

This simple blend of meat and spices tastes like it just came out of Grandma's frying pan.

Pork trimmings	5 lb	2.3 kg	100 lb
Salt	8 tsp	40 ml	28 oz
Ground black pepper	41/2 tsp	22.5 ml	6 oz
Sage	2 tsp	10 ml	2 oz
Ginger	11/4 tsp	6.25 ml	2 oz

Grind the trimmings through a medium fine grinding plate and add the dry seasonings. Mix thoroughly in a bowl. Wrap for storage in either bulk packages or form patties and separate with waxed paper. Wrap and freeze. Cook before eating.

Sweet and Savory Sausage

Brown sugar gives this sausage its sweet taste and good browning qualities. The recipe also contains part beef for those who prefer that flavor and texture.

3 lb	1.3	5 kg
1 lb	.4	5 kg
	120	ml
	1 lb	1 lb .4 8 packed, 120

Grind meat through a fine plate and mix together. Sprinkle spice premix onto meat and mix thoroughly with hands. Wrap in meal-sized packages, or form patties and separate with waxed paper, and then freezer wrap. It may also be stuffed into small casings and cooked as breakfast links.

Spice Premix

Brown sugar	1	lb	450	gm
Ground black pepper	4	tbsp	60	ml
Monosodium glutamate	5	tbsp	75	ml
Salt	1	cup	250	ml
Sage	5	tbsp	75	ml
Crushed red pepper	2	tsp	10	ml
Nutmeg	21/2	tsp	13	ml

Mix spices and sugar together thoroughly. A pastry cutter works well to blend them together. Store in a tightly covered container for up to 6 months. Premix may be used in a proportion of 2 packed level tablespoons premix to 1 pound of ground meat.

Recipe courtesy of Dale C. Herre

Italian Style Sausages

Italian sausage is a coarsely ground, fresh sausage with the characteristic flavor of fennel seed. It is usually stuffed in natural hog casings. It can be panfried or broiled. One of the most popular uses is in cooking sauces for Italian dishes such as spaghetti sauce or pizza sauce.

Italian Sausage

A mild sausage with a distinct, fennel taste.

Lean pork trimmings	5 lb	2.3 kg
Salt	3 tbsp	45 ml
Crushed black pepper	31/2 tsp	17.5 ml
Fennel seed	3 tsp	15 ml
Cold water	½ cup	125 ml

Grind meat through a medium grinding plate. Mix remainder of ingredients thoroughly with meat. Stuff into natural hog casings in links 6 inches long or a long coil. Refrigerate overnight and freeze the following day. Cook before eating.

Recipe courtesy of Dale C. Herre

Hot Italian Sausage

This is a very hot, spicy sausage. If you prefer it milder, cut the peppers in half or even less. But for a "hot food lover," this recipe really lights a fire!

Lean pork trimmings	5	lb	2.3 kg
Salt	21/2	tbsp	37.5 ml
Fennel seed	21/2	tsp	12.5 ml
Crushed red pepper		tsp	20 ml
Ground black pepper	13/5	tsp	7.5 ml
White pepper		tsp	5 ml
Paprika	1	tsp	5 ml
Coriander	11/2	tsp	7.5 ml
Fresh chopped parsley (optional)	2	tsp	10 ml
Minced garlic clove (optional)	1	clove	

Grind pork trimmings through a medium grinding plate. Mix the seasonings thoroughly with the ground mixture. Stuff in natural hog casings in links of the desired size. Refrigerate overnight to marinate spices. Freeze the following day, or, if immediate use is intended, refrigerate and use within 5 days.

Kielbasa — Fresh Polish Sausage (Waraksa Style)

A moist, spicy sausage with the characteristic flavor of garlic and marjoram.

Pork trimmings or pork shoulder butt	10	lb	4.6	kg
Onion (finely chopped)		medium		
Salt	6	tsp	30	ml
Pepper	1	tbsp	15	ml
Whole marjoram	10	tsp	50	ml
Powdered sage	2	tsp	10	ml
Thyme	2	tsp	10	ml
Pressed garlic	2-4	cloves	2-4	cloves
Bay leaves	4	leaves	4	leaves
Water	1	cup	250	ml

Coarsely grind the raw meat. Saute onion and garlic lightly and add marjoram, sage, thyme, salt, pepper, bay leaves and water. Simmer for 2 minutes and then let stand covered for 10 minutes. Remove bay leaves. Add mixture to ground meat and mix thoroughly. Cover raw bulk sausage and refrigerate overnight.

The next day, stuff into natural hog casings to desired lengths. Cook fresh or freeze the sausage. Cook by simmering sausage for 40 minutes, and then brown in a hot skillet.

Recipe courtesy of Mark Masarik

Bratwurst - Fresh Sausage

A very tender and mild fresh sausage made with pork and yeal.

Fresh veal	1/2 lb	230 gm
Pork loin	1 lb	460 gm
Salt	1½ tsp	7.5 ml
Pepper	1 tsp	5 ml
Nutmeg	½ tsp	2.5 ml
Mace	½ tsp	2.5 ml
Cold water	1/5 cup	125 ml

Combine veal, pork, salt, pepper, nutmeg and mace. Put through grinder with a fine plate three times. Mix water into meat. Stuff into natural hog casings and twist into 4-inch links. Cook fresh or freeze the sausage.

Cooked Sausage Recipes

Polish Sausage

Made of coarsely ground, lean pork and beef. Garlic and marjoram are the basic spices characteristic of Polish sausage. However, you can leave out the garlic and a very tasty sausage still remains. Polish sausage is not only a tasty breakfast sausage but an excellent dinner sausage.

Beef trimmings	41/2	lb	20.4	kg
Lean pork trimmings	11/2	lb	6.8	kg
Flour (buckwheat, rye or whole wheat)	1/2	cup	125	ml
Salt	3	tbsp	45	ml
Pepper	11/2	tbsp	22.5	ml
Ground sage	2	tbsp	30	ml
Mustard seed	1	tbsp	15	ml
Garlic (optional)	2	cloves	2	cloves
Marjoram	1	tbsp	15	ml

Grind the meat coarsely. Sift the flour, salt, pepper, sage and marjoram together and add to the meat mixture. Add the mustard seed and minced garlic and mix all together very thoroughly. Regrind the mixture using a medium grinding plate and stuff into hog casings. Link in 4 to 5-inch or 8 to 10-inch lengths. Hang the sausages in the smoker and smoke at 100° F for 2 hours. Remove the sausage from the smoker and immerse in water; simmer at no higher than 180° F until they float. Remove and rinse with hot water and then cool in cold water. When cool, hang them to dry in a refrigerator. Eat within 5 days or freeze.

Vienna Sausages

Vienna style sausages are known by different names according to the size of casings you use in stuffing them. Stuff into sheep casing for regular weiners or hog casing for the larger frankfurters. The usual proportions of meat used in Vienna style sausages are 2 parts beef to 1 part pork or 2 parts pork to 1 part beef. You will probably find you prefer one over the other if you try both of these recipes.

Vienna Sausage

Smooth, moist texture and mild flavored frank.

Pork trimmings	4 lb 1.8 l	kg
Lean beef trimmings	2 lb .9 l	kg
Ground red pepper	3/4 tsp 3.75	ml
Salt	3 tbsp 45	ml
Coriander	4 tbsp 60	ml
Mace	11/4 tsp 6.25	ml
Sugar	1½ tsp 7.5	ml
Saltpeter	1 tsp 5	ml
Cold water	21/4 cups 562.5	ml
White flour	1 cup 250	ml
Onion (finely minced)	¼ cup 60	ml

Grind the meat together with a coarse blade. Measure flour, seasonings and saltpeter together and sift them onto the meat. Add the water and onion and mix thoroughly. Grind the mixture again using a small blade. Stuff into the desired size of casings and hang in smoker. Smoke it for 4 hours at 90°F. Remove from smoker and cook in water at 155°F until they float. Immediately remove and rinse the outsides with hot water to remove the grease. Then immerse in cold water until cool. Hang sausages in a refrigerator to dry. Put in plastic bags and freeze if they will be kept longer than 3 days.

Spicy Vienna Sausage

Spicy and coarser textured frankfurter.

Beef trimmings	4	lb	1.8	kg
Fat pork trimmings	2	lb	.9	kg
Morton Tender-Quick	3	OZ	84	gm
Ground black pepper	21/2	tbsp	37.5	ml
Mace	11/2	tbsp	22.5	ml
Garlic clove, finely chopped (optional)	1/2	clove		

Coarsely chop meats together. Mix seasonings and Tender-Quick together. Then mix thoroughly with the chopped meat and grind with a fine blade two more times. Stuff into the desired size casing and hang in smoker. Smoke for 3 hours at 90°F or until they turn a nice orange color. Then remove from smoker and cook in 150°F water until they float. Rinse in hot water to remove grease and then immerse in cold water. When cool, hang in a cool, dry place until dry. Then refrigerate or package in plastic bags and freeze up to 3 months.

Recipe courtesy of Morton Salt Co.

Bologna Sausage

A simple, 2-day bologna with mild flavor and bright pink color.

Lean beef	31/2 11	6	1.58	kg
Saltpeter	1 ts	sp	5	ml
Salt	1/3 c	up	83	ml
Lean pork	2 18	b	.9	kg
Fat pork	1/2 11	b	.45	kg
Ground black pepper	13/4 ts	sp	8.75	mi
Whole wheat flour	1 c	up	250	ml
Cold water	1 c	up	250	ml
Mace	21/2 ts	sp	12.5	ml

Grind the beef coarsely. Dissolve the saltpeter in 1/4 cup of water, and then mix thoroughly with the salt. Spread the meat on a flat surface and sprinkle salt mixture over it. Then mix meat thoroughly. Allow it to stand for 24 hours in a refrigerator.

Grind the lean and fat pork with a coarse plate. Add it and all other ingredients to the beef mixture, which has cured for 24 hours. Mix all together thoroughly.

Regrind the mixture with a fine plate and pack or force the meat into casings (from 1½ to 5 inches in diameter). Hang the bologna in the smoker. Smoke until red in color, for 2 to 8 hours, depending on the size.

When red, remove from smoker. Cook the bologna in water at a simmering 180°F for about 30 minutes or until the sausages float.

Remove from simmering water and immerse in cold water until cool. Hang the sausages to dry. Store the bologna under refrigeration.

Liver Sausage

A flavorful cold cut. Liver sausage is an excellent way to use pork livers and other variety meats that are high in nutrients. The whole wheat flour in the recipe gives it a smooth, moist texture. If you are unable to get a 2½-inch fibrous casing, make a tube out of unbleached muslin.

Pork trimmings	2	lb	900	gm
Pork heart or other variety meat	2	lb	900	gm
Pork liver	1	lb	450	gm
Salt	2	tbsp	30	ml
Ground black pepper	2	tsp	10	ml
Mace	1	tsp	5	ml
Marjoram	1	tsp	5	ml
Ground clove	1/2	tsp	2.5	ml
Chopped onion	1/4	cup	60	ml
Whole wheat flour	6	oz	168	gm
Cooking broth (strained)	2	cups	500	ml

Cut meat in small pieces and thickly slice or deeply score liver. Cook until tender. Then drain and keep the broth. Grind meat with fine plate. Mix flour, onion and seasonings thoroughly with meat and grind once more. Mix in 2 cups of the broth you kept. Stuff into $2\frac{1}{2}$ -inch casings and simmer in 150° F water for 30 minutes or until it floats. Immerse in cold water until cool. Drain and hang in a cold, dry place overnight. Refrigerate or package and freeze for long-term storage.

Salami

An easy recipe that results in a well-flavored salami.

Ground beef (not too lean)	5	lb	2.3 kg
Garlic salt	1	tbsp	15 ml
Mustard seed	41/2	tsp	22.5 ml
Morton Tender-Quick	5	heaping tsp	25 ml
Coarse or cracked pepper	41/2	tsp	22.5 ml
Liquid smoke	2	tsp	10 ml

Mix meat and other ingredients thoroughly together. Divide the mixture into three equal parts. Put each part in a double plastic bag and refrigerate for 3 days. Each day, knead the meat mixture in the bag. On the third day, roll each portion into a roll $2\frac{1}{2}$ inches in diameter. Place the three rolls on a broiler tray in a 150° F oven for 8 hours.

Headcheese

Split and clean the head thoroughly. Remove eyes, ear drums and nasal passages. Chop out the teeth. Put the cleaned pieces in a large kettle, cover with water and simmer until the meat can be easily removed from the bone. Drain and reserve the liquid. Remove the meat from the bones and grind it through a medium grinding plate. Return the meat to the kettle. Add enough of the reserved liquid in which the meat was cooked to cover the meat. Season to suit the taste. A good proportion of seasonings is given below. Boil the mixture for 15 minutes stirring well. Pour the mixture into shallow loaf pans, cover with cheese cloth and weight down. Allow to cool and set in a refrigerator. Then slice for serving.

Headcheese may be put in casings to set. Do this after the seasoning is added and before the final cooking. Stuff mixture into fibrous or muslin casings and tie ends. Place the casings in the remaining liquid and simmer until it floats. Cool until set in a refrigerator.

Per 2 quarts (1.9 liters) meat mixture add:

Salt	1½ tbsp	22.5 m
Pepper	3/4 tsp	3.75 m
Ground red pepper	1/8 tsp	.625 m
Sage	1 tsp	5 m
Coriander	½ tsp	2.5 m
Marjoram	1/4 tsp	1.25 m

Product Names

Product names are used in this publication to simplify the information presented. Use of product names does not imply an endorsement of the product nor criticism of similar products that are not mentioned.

References

You may wish to purchase these reference books as you get more involved in making sausage.

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