

## Sausages

Sausages are made by grinding raw meats along with salts and spices. The mixture is then stuffed into natural or synthetic casings and cooked to the appropriate temperature. Some variations of sausages are: fresh sausages, smoked sausages, semi-dry sausages and dried sausages. The basic ingredients to any sausage include fat (the most important) meat, sugars, salts and spices. A basic ratio of 70% meat to 30% fat by weight is used for optimal texture in the finished product. As discussed earlier, nitrites and nitrates are used as a preservative in smoked, semi-dry and dried sausages. Due to time allotment, we will discuss these ingredients and techniques and I am always available to answer questions. We must first master the basics before taking on the difficult recipes for these sausages and cured meat items.

The most important issue when making sausage or curing any type of meat product is proper sanitation and temperature. Working as clean as possible throughout the entire process as well as maintaining clean equipment is essential. Keeping all equipment such as bowls, grinders and any other equipment, as well as the meat and food in the cooler is very important as the grinder will create friction and begin to heat the meat up. If the meat gets too warm for a long period of time while processing, bacteria could thrive and we need to take all necessary precautions to prevent this from happening.

The basic process for sausage making is rather easy. Beginning with your appropriate meat product (pork shoulder is used as it is naturally a good ratio of meat to fat). If using another meat product such as venison, chicken, turkey or lamb, the addition of pork back fat or heavy cream is needed. These meats are generally lean and need the additional fat to create the proper texture. Mix the meat with the spices, sugars and additional items in the recipe and grind appropriately. Some recipes ask for a progressive grind, meaning you will start with the largest die and continue to grind through all of the dies until the correct grind is achieved. Other recipes simply grind through one die and then on to mixing. The next step after grinding is to “paddle” the sausage and bring out the natural myoglobin in the meat. This is the protein that causes the meat to stick together and helps to create the appropriate texture in the sausage. The general rule for this process is in a mixing bowl with a paddle attachment. 1 minute on speed 1 and 20-30 seconds on speed 2. at this mixing stage we usually mix a small amount of water with the mixture to incorporate the spices and assure that they are evenly distributed throughout the mixture. A test of the sausage is now done by cooking off a small portion of the sausage to check the seasoning level and make sure you are happy with the finished flavor. After the taste, the sausages are stuffed into the appropriate casings, be it natural sheep, hog, bung or synthetic casings. Now, the sausages can be cooked, smoked, dried or fermented according to the recipe. Here are some recipes of sausages we will develop today and some easy recipes for home use.

## Fresh Breakfast Sausage

### Ingredients:

2 1/2 pounds	Boneless pork shoulder (butt) diced 1 inch
1 Tablespoon	Kosher Salt
2 teaspoons	Rubbed Sage
1/4 teaspoon	Fresh ginger
3/4 teaspoon	Nutmeg
3/4 teaspoon	Fresh chopped thyme
3/4 teaspoon	Red pepper flakes
1/2 cup	Ice water, ice removed

Mix all ingredients together except the water, and chill to keep cold at all times. Progressively grind the meats through the large die and then the medium die of the grinder, keeping cold at all times. Place the ground meat mixture in a mixing bowl and add the water. Mix with the paddle attachment for 1 minute on speed 1 and 30 seconds on speed 2 of the mixer to achieve primary bind. The meat should be sticky to the touch. Stuff into sheep casings or simply patty the meat and sauté. Cook to an internal temperature of 160 degrees.

## Fresh Kielbasa

### Ingredients:

2 1/2 pounds	Boneless pork shoulder (butt) diced 1 inch
1 Tablespoon	Kosher Salt
1 teaspoon	Sugar
1 each	Clove of garlic
3/4 teaspoon	Dry marjoram
1/4 cup	non-fat dry milk powder

Mix all ingredients together and chill to keep cold at all times. Grind the meats through the large die of the grinder, keeping cold at all times. Place the ground meat mixture in a mixing bowl. Mix with the paddle attachment for 1 minute on speed 1 and 30 seconds on speed 2 of the mixer to achieve primary bind. The meat should be sticky to the touch. Stuff into hog casings or simply patty the meat and sauté, grill or roast. Cook to an internal temperature of 160 degrees.

## Smoked Sausage and other Smoked Products

### Hunters Sausage

#### Ingredients:

2 ½ pounds	Boneless pork shoulder (butt) diced 1 inch
1 Tablespoon	Kosher Salt
½ teaspoon	Pink Cure
2 teaspoons	Dextrose
¾ teaspoon	ground white pepper
¼ teaspoon	ground coriander
1 each	fresh garlic clove
¼ ounce	toasted mustard seeds
¾ teaspoon	ground nutmeg
¼ teaspoon	ground ginger
¼ cup	non-fat dry milk powder

Grind the meat through the large grinder plate, making sure all of the ingredients are well chilled. Then grind half of the mixture through the small die of the grinder. Place both grinds in the chilled mixing bowl and paddle for 1 minute on speed 1 and 30 seconds on speed 2 while gradually adding the remaining ingredients. Stuff into hog casings and place uncovered under refrigeration for 12 – 24 hours to form a pellicle. Smoke to an internal temperature of 160 degrees.

Another aspect of smoking meat products is a brine. As with the above sausage, you will enhance the flavor of the meat product by forming a pellicle. This is air-drying the product long enough to form a tacky skin. This is an important process as it forms a barrier for the meat product and helps to capture the smoke flavor to be introduced. Brining can be used to enhance the flavor of any roasted meat as discussed previously. When it comes to smoking, the brine enables you to enhance the flavor, preserve the meat and capture the smoke all in one. Below are 2 different meat brines that can also be used. The first is a basic meat brine used for many recipes. The second is a type of brine that I have learned from the C.I.A. at Greystone in Napa Valley. The recipe takes some math but is well worth the equation.

## Basic Meat Brine

- 1 gallon cold water
- 1 cup Kosher Salt
- ½ cup sugar (or corn syrup)

- Combine all of the ingredients and bring to a boil.
- Cool completely in the refrigerator.
- Submerge the meat under the brine by weighing it down with some plates.
- For whole chickens, 12-14 hours, Pork Loins 14-16 hours, chicken breasts 1-2 hours, fillet of fish 2-3 hours.
- Pull from the brine, rinse under cool water, rest for 12 hours under refrigeration, smoke or roast to 165 degrees.

Again, you can impart any desired flavor into this basic recipe. For a pork product, apple cider, onions, orange, mustard. For seafood, fresh dill and lemon can be used, and the possibilities are endless for chicken products, I tend to use ½ beer and ½ water.

## Math Brine:

- |           |               |
|-----------|---------------|
| 1 each    | Piece of Meat |
| As needed | Water         |
| As needed | Kosher Salt   |
| As needed | Sugar         |
| As needed | Flavorings    |
| 1 each    | Calculator    |
| 1 each    | Scale         |

Place the meat in a non-reactive container and fill with water to just cover the meat. Add your desired flavorings as discussed in the above recipes. Take the total weight on the scale and then: 3% of the total weight is how much salt you will add, in addition, 2% of the total weight is sugar.

This brine produces a juicy, moist and delicious product every time. The brine time can be up to 3 days with little variation in the end flavor of the meat.

## Smoked Ham Hocks

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|----------|----------------------------------|
| 5 pounds | Ham Hocks                        |
| 1 recipe | Basic meat brine                 |
| 2 ounces | Tinted Curing Mix (Pink Cure #1) |

Combine all ingredients and mix until dissolved. Submerge the ham hocks in the brine in a non-reactive container. Use a plate or plastic wrap to keep them under the brine.

Refrigerate the hocks for 3 days to cure. Form a pellicle for 12 – 24 hours and smoke to an internal temperature of 160 degrees. They can be kept under refrigeration for up to 6 weeks. Frozen indefinitely.

#### Canadian Bacon:

1 each	Boneless Pork Loin (trimmed of all fat down to the eye)
1 each	Basic meat brine
2 ounces	Tinted Cure Mix (Pink Cure #1)

Net or tie the pork loins. Weigh the loin and pump with 10% of its weight in brine. Place the loin in a non-reactive container and pour enough of the brine over the loin to cover it. Weigh it down with plates or plastic wrap to keep it below the surface. Keep it under refrigeration for 3 days in the brine. Rinse the loin under warm water and soak in fresh water for 1 hour. Refrigerate for 12-24 hours to form a pellicle. Smoke at 185 degrees until an internal temperature of 155 degrees. For about 4 hours. They can be refrigerated for up to 2 weeks and frozen indefinitely.

#### Lardo:

1 each	3 – 4 Pound Slab of Pork Backfat
1/2 recipe	Basic Dry Cure
6 Each	Bay Leaves
4 Bunches	Fresh Thyme
1/3 cup pan)	Whole Black Peppercorns (cracked with the bottom of a

Dredge the pork back fat in the basic dry cure and place in a non-reactive container. Sprinkle all of the dry cure over the back fat and place the remainder of the ingredients in the bottom of the pan and over the top of the fat. Weigh the fat down with another pan over the top and hold under refrigeration for 10 – 12 days. Make sure to turn the fat and re-rub the fat every other day. Wrap the fat in cheesecloth and hang in a dark humid place for 20 – 25 days. The ideal place to hang is in a basement or wine cellar.