

Smoked Meats

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Meat is smoked to produce a desirable color, flavor and aroma. Of the more than 390 individual chemical compounds that have been detected in wood smoke, over 70 of these compounds have been found in smoked foods. The type of wood used to generate smoke, the moisture content of the wood, and the temperature and method of producing smoke all influence what type of compounds will be generated from smoke.

To smoke meat at home, many people use a relatively inexpensive barrel type smoker. If the unit is not electric or gas fired, hot coals can be used to produce heat. Smoke may be generated using a variety of fuels including cord wood, corn cobs, wood shavings or sawdust, or may be applied in the form of liquid smoke. Hardwoods such as oak and hickory are commonly used to generate smoke because of their low resin content. Although softwoods can be used, they can produce a strong, bitter flavor.

Commonly, smoke is applied during the initial phases of cooking or even before a product is cooked. Determining how long a product should be smoked will depend on how well smoke is deposited on the product surface. The deposition of smoke on a meat product is affected by the smoke density, the humidity and air movement in a smoker, and the surface conditions of the meat to be smoked. Wood, including sawdust, should be soaked in water for several hours or overnight before placing on the heat source to generate smoke. This will help produce a denser smoke or smudge and prevent the smoke source from burning up too quickly. High humidities during smoking will increase smoke deposition, but may cause a muddy brown appearance on the meat surface. If the meat surface is wet when smoke is applied, streaking can occur. Too little humidity during smoking can cause a meat surface to become very dry, leading to poor smoke adherence and a pale color. It is recommended to apply smoke while the meat surface is tacky to the touch. Also, start with uniform product surface conditions. This can be accomplished by misting the product surface lightly with water followed by drying the product slightly before smoking, or using some other pre-conditioning step before smoking. Adjusting the relative humidity in a smoker to 30-38 percent will help achieve good smoke deposition and an attractive surface color.

Liquid smoke, derived from wood using a series of extraction and refinement procedures, contains the same functional compounds that are found in vaporous smoke. Meat products can be dipped or sprayed in liquid smoke, or the smoke can be added directly into pickles or sausage batters. In commercial smokehouses, liquid smoke can be atomized onto meat surfaces during the cooking process.