



food smoking



what is it?

It is an ancient method of preserving food using wood smoke. It is believed to be almost as old as the use of fire itself. When prehistoric people hung the surplus meat or fish they had caught after a hunting or fishing trip from the ceiling of their cave to protect it from vermin and contamination, they would have noticed that the meat exposed to the smoke of the fire stayed edible for longer, and if washed with sea water first, it lasted even longer. When humans started farming, smoking was one of the few methods of preserving meat. Smoke houses started to appear on farms, apart from the main building – due to smoke, and the fire risk. There are many products on the market that have been treated with smoke flavours to make them resemble smoked foods. This practice has nothing to do with real food smoking and is banned in some countries, although it is common in the UK, the US and Australia.

Smoked food is usually meat, sausages, fish or cheese, but can also include eggs, vegetables and nuts. See 'what can I do?' for modern methods of smoking.

what are the benefits?

It is a form of food preservation using a renewable resource, with the added benefit of improving flavour. So before electricity, a smallholder could kill a pig, smoke the hams and make cold smoked sausages, and they would keep until the next pig was killed, 6 months later. This can still be done today, and not only will the meat be preserved without the need for refrigeration, it will have a wonderful smoked flavour too.

We've recently discovered that wood smoke contains compounds such as phenols that inhibit the growth of microbes that cause food to spoil. Also, the salt, which is used to cure or brine prior to smoking, draws the water out of the cells of the bacteria and kills them. In developed countries, where fridges, freezers and E numbers can preserve foods for long periods, improving flavour through smoking is often more important than the preserving properties of the smoke.

Food smoking is part of a revival of old crafts and traditional foods, and an increase in food awareness – people want to know what's in the food they are eating. The trend is towards high-quality 'slow' food, with local, natural ingredients free from chemical additives.

Smoking is a way for farmers, smallholders, hunters and fishermen to make use of large amounts of meat or fish at certain times of the year. For others it is a way of increasing their

range and adding quality and value to their products, which is what an increasing number of customers demand.

Cold smoking is the method used for preservation. Cold smoked meats are ideal to take travelling as they don't go off. Fish can't really be preserved for long periods, but with hot smoking, fish can last a few days longer – although the real motive is to improve the flavour.

what can I do?

cold smoking: often referred to as 'real' smoking. The temperature is usually lower than 32°C and the smoking time is long - from several hours to 3 weeks. The smoked product is still 'raw' after cold smoking, e.g. Parma Ham or salami. Some cold smoked foods have to be cooked before eating. Food needs to be cured before cold smoking.

hot smoking: applies smoke with temperatures of more than 70°C. The smoking time varies from minutes up to a few hours. It's almost barbecuing - hot smoking 'cooks' food, e.g. hot smoked trout or smoked kippers. Prior to hot smoking, food is often cold smoked for a period of time to support the drying process and enhance the flavour.

wet and dry smoking: for wet smoking, put a bowl of water in the smoker to keep the food moist. This is exactly what you don't want if you are cold smoking for preservation however – you want the food as dry as possible.

barbeque smoking: currently there is a trend for 'barbeque' smoking in America, which uses barbeques with lids or specially designed smoke barbeques. The method is the same as hot



bratwurst rings after cold smoking



a smoke house on a farm in Poland

smoking, except that there is no period of cold smoking. It's a flavour-enhancing cooking method, and not anything to do with preservation.

curing: dry curing is rubbing with salt; brining or wet curing is soaking in salt water. After curing, the food is washed & dried before smoking.

buying / making smokers: you can buy smokers – but they tend to use an electric element or gas to light the sawdust / wood shavings and keep them lit. From a low-impact perspective, it's better to make your own smoker – and it's very simple. All you need is a metal (or even wooden) cupboard, some hooks for hanging the food, or racks for cheese etc, a metal tin at the bottom for holding the wood shavings, and some way for the smoke to escape. One of our course tutors has smoked food using an oil drum with a hole in the top over a fire pit.

wood shavings: find a local wood-working workshop and ask them. It has to be hardwood, and not treated – so furniture makers are ideal. Softwoods contain resin, which produces nasty tasting soot. Or you can buy hardwood shavings. A typical cold smoking uses 50g of shavings a day, so a little goes a long way.

methods: just to give you a general idea – look at books for more detailed recipes.

Meat: depending on the meat, you can dry cure or marinade with salt/brine (up to 200g salt per kg of meat) plus a range of other ingredients such as sugar, molasses, beer, berries, pepper, cloves etc, and leave for a few days to a few weeks. Then rinse, dry and hang for a day or two. Cold

smoke for a day or two, then wrap in muslin and hang in a cool, dry place out of sunlight.

Trout: dry cure - 5–10g salt per 100g fish, bay leaves, juniper berries (and some sugar if you want). Curing time by weight: 200g – 2 hours; 300g – 2½ hours; 400g - 3¼ hours. After curing, clean and dry fish. Cold smoke for 2 hours. Then hot smoke for 1–1½ hours at 80-85°C. Eat hot or let it cool down until the juices stop running.

Cheddar cheese: cut into cubes of around 4x4x4cm to prevent excessive cracking. Curing / salting is not necessary as the cheese already contains salt from the cheesemaking process. Cold smoke for 2 hours; eat or store wrapped in kitchen foil in a dry, cool place.

resources

- LILI run a course, and have woodchips, links to information and suppliers' sites, and a range of books, including:
 - *Practical Food Smoking*, Kate Walker
 - *Home Smoking & Curing*, Keith Erlandson
 - *Mastering the Craft of Smoking Food*, Warren R Anderson
 - *Charcuterie: the craft of salting, smoking & curing*, Brian Polcyn & Michael Ruhlman
- foodsmoker.co.uk - Arden Smoker Supplies - lots of kit for food smokers
- smokyjos.co.uk – courses, DIY smokers gallery
- uga.edu/nchfp/how/cure_smoke.html – How Do I?..... Cure & Smoke



a home-made filing cabinet smoker in use

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