Non-meat Ingredients

Along with the main components meat and animal fat, a wide range of substances of non-meat origin are used as ingredients in processed meat products. Some of them are absolutely necessary, such as salt and spices. Others are used for specific products.

The criteria for the utilization of functional non-meat ingredients are:

- Safe for consumer
- Improve of processing technology and/or sensory quality of the product.

Non-meat ingredients can be:

1. Chemical substances
2. Plant origin
3. Animal origin

Chemical substances/Additives

They are usually substances, which are not normally consumed as food by itself, but which are added to develop certain technological and quality characteristics (for example salt, curing agents, spices, water binding etc.)

- Salt (for taste, impact on meat protein, shelf-life)
- Nitrite (for curing color, flavor, shelf-life)
- Ascorbic acid (to accelerate curing reaction)
- Chemical preservatives
- Antioxidants
- Monosodium glutamate (for enhancement of flavor)
- Food colouring substances

Non-meat ingredients of animal origin

Ingredients of animal origin are not commonly applied but may be useful for specific meat preparations. Apart from their functional properties, some of them can be considered meat extenders, as mentioned below:

- Milk caseinate (water and fat binding properties.)
- Whole milk or non-fat dried milk (sometimes used in indigenous meat preparations as protein extender)
- Gelatine (binding properties and meat extender)
- Blood plasma (predominantly binding properties)
- Eggs (extender and binding ingredient for meat)

Ingredients of plant origin

All spices are of plant of origin. They are predominantly functional and used in small quantities to add flavor and taste to meat products.

In contrast to the exclusively functional substances, there is another group of ingredients that are not primarily intended for change of appearance or quality improvement but serve to add volume to the meat products. They are called meat extenders and fillers.

Their main purpose is to make meat products lower-cost.

Meat extenders and fillers include cereals, legumes, vegetable, roots and tubers and are used in larger quantities, on average between 2-15%.

Meat extenders

Meat extenders are primarily plant proteins from legumes, with soybean as the major source. Textured vegetable protein is the most common soybean extender.

Fillers

Fillers are also mostly plant substances, low in protein and high in carbohydrates such as cereals, roots, tubers and vegetables and some refined products such as starches and flours. Pure meat products are very low in carbohydrates. Hence the addition of carbohydrate-rich substances is not an “extension” of the protein mix, but some new components “fill up” the product volume.