

Innovations in Processing and Production of Meat and Meat Products

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Definition of innovation

Products differentiated from existing both in the production process, and the organoleptic, nutritional and biological characteristics in order to enhance their overall quality and thus better acceptance by consumers

Means to achieve innovation

- New productions technologies
- Change-improving presentation and organoleptic characteristics
- Eliminate disadvantages associated with meat products and meat preparations
- Improving the nutritional and biological value
- Combinations with different other foods

New production technologies

- New production technology for fast-ripening dry fermented sausages
- Extruder technology for frankfurters
- Use of “bioprotection” and other new methods to extend the self life (UHHP)
- New methods for the production of traditional Greek meat products (Singlino as sterilized product)
- Entirely new products

New productions technologies

Meat without murder: How commercially viable is lab-grown meat?

Lab-grown meat could solve many of the world's environmental problems, says the co-founder of an Israeli non-profit organization studying the feasibility of mass-produced cultured chicken meat...

By Caroline Scot-Thomas. 12-Jan-2015

Innovations in Food

Ingredients

Twice-Monthly Newsletter

Change-improving presentation, commercial value and organoleptic characteristics

- **New shape, new presentation**
- **Use of new production equipment**
- **Use of new production technologies**
- **Innovative packaging**

Eliminate disadvantages

- **Products with a reduction or substitution of animal fat**
- **Products with a reduction or substitution of sodium chloride**
- **Products with a reduction or substitution of nitrates and nitrites**

Products with reduction or substitution of animal fat

- Fat contributes to the creation of the characteristic structure of the sausage, assists dehydration of dry sausages and improves the flavor and juiciness
- Reduction of fat is directly linked to a decrease of the sensory quality of the product, as well as to various technological problems

Products with reduction or substitution of animal fat (I)

- Substitution with polysaccharides such as inulin and fiber.
- Substitution with olive oil
- Use «salatrim» (short and long chain acyl triglyceride molecules) with an energy efficiency of 6 kcal/g.
- Using "reconstructed fat" obtained from animal fat, water and alginate in a ratio of 10: 20: 1.

Reduction of NaCl content with or without use of substitutes

- Recommended daily intake:5-6g
- Is essential for taste-flavor, conservation and water holding capacity
- It is possible a reduction till to 40% without serious impacts
- Substitution with KCl, MgCl, CaCl.
- Products without NaCl (use of alginates)

Reduction of Nitrite with or without use of substitutes

- Nitrites have a conservative and antioxidant activity and contributes to color, flavor and **nitrosamine** formation
- A direct reduction of up to 40% is possible, without serious impacts
- Products without added nitrate-nitrite (White sausages)
- Replacement of nitrites with natural ingredients and colorants

Improving the nutritional and biological value

- With the presence of beneficial ingredients, derived either by adding some of them in the animal feed or by adding them during the production process of the meat product or meat preparation (omega-3, natural antioxidants and antibacterial substances, fibers, probiotics, phytosterols)
- Create beneficial ingredients during the production process (Probiotics, bioactive peptides s. ACE)

Functional meat products and meat preparations

Strengthening the presence of such substances, we can contribute to the creation of

"functional meat products and meat preparations"

which, beyond the benefits of nutritional and biological value that already offer, act beneficial to human health

Conditions for their marketing (Reg. 1924/2006)

- They should have the same organoleptic characteristics (appearance, smell, taste) to conventional counterparts
- To demonstrate through clinical studies the beneficial effects on human health
- Bring all necessary by law information and ensure not being misled
- **«FOSHU» (Foods Specified for Healthy Use)**

Meat products and preparations, combined with different other foods

- Use of whey protein
- Combinations with vegetables
- Combinations with cheese eggs and other foods