GUADELOUPE MEETING 2019 NOVEMBER 25-29

ERASMUS+ PROJECT 2018-2020 CONSERVATION OF FOOD

FOOD CONSERVATION BY SMOKING

Smoking is a technique for preserving and flavouring certain foods by exposing them to smoke

The operation consists mainly of subjecting a foodstuff to the action of fumes emanating from the combustion of certain plants.
Originally, the aim was to influence the shelf life of the treated product : This is how, in addition to curing and drying, smoking belongs to the group of the three oldest food preservation processes.
Subsequently, the search mainly for a gustatory quality and secondarily that of a mode of presentation of the product prevailed.
Smoking therefore plays several roles : Flavouring and colouring of the product, preservation of the product (anti-microbial effect), hardening of the texture.
Can be smoked cold (12-25°C), hot (50 to 85 °C : protein denaturing and destruction of micro-organisms) or at an intermediate temperature (25 to 50 °C: activation of endogenous enzymes improving the tenderness of the product).

Organoleptic action:
The typical aroma of the smoke is due to phenols (gaiacol, syringol,...).
The different types of wood used have a strong influence on the flavour.
Carbonyls and acids are at the origin of the differences in flavour (aroma + taste).
The coloring varies with the types of wood used.

Chemical action:
During smoking, there is a slight lowering of pH, due to the formation of acids that can promote good conservation. smoke has an antioxidant effect due to phenols on lipids. They inhibit the propagation phase of auto-oxidation.

Antibacterial action:
Some phenols have a bacteriostatic effect on the growth of microorganisms. However, in the case of hot smoking, it is mainly the temperature that causes the antibacterial action. In addition, the action of salt reduces water activity.

MUST KNOW
Compounds in the smoke
do not always have beneficial roles. When smoking is not properly carried out: smoked products may present risks through the deposition of polycyclic aromatic hydrocarbons, which may cause cancer.

Credits : Wikipedia, FAO Manual on simple methods of meat preservation, 1990

Université des Antilles Pôle Guadeloupe
IUT Institut Universitaire de Technologie de la Guadeloupe
Département Génie Biologique

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