



English

Summary

BAYONNE HAM
IMPACT OF HEAT-CURING ON THE PEPTIDE FINGERPRINT OF BAYONNE HAM
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This study focuses on the impact of heat-curing on the peptide fingerprint of the soluble protein fraction of Bayonne ham. The method used employed LabChip Agilent protein cleavage. The electrophoretic profiles thus obtained revealed slight proteolysis differences in the biceps femoris muscle. Nevertheless, there were no differences in the average texture profiles of Bayonne ham. The heat-curing phase applied under these conditions therefore has no impact on product texture.

Keywords: Bayonne ham, heat-curing, protein markers

QUALITY OF COOKED HAM
INCIDENCE AND SERIOUSNESS OF DESTRUCTURED AREAS IN SWISS COOKED HAM

HUGENSCHMIDT G., HADORN R., SUTER M., SCHEEDER M.R.L., WENK C.

According to statements from the Swiss meat processors, the phenomenon of destructured zones in cooked hams, which often results in ruptured slices, can lead to relevant economic losses. The aim of this study was to identify the causes for defective, non-saleable slices of cooked ham in a first survey. For this purpose, the slices considered as unsuitable for marketing (3 up to 7 % of the total production) were examined in twelve batches of cooked hams from seven different Swiss meat-processing companies. Destructured areas made up 33 % of the total losses. Further losses were due to straight ruptures of the slices (28 %), slices featuring immoderate intermuscular fat (10 %), slices containing excessively coloured red zones (9 %), slices with holes (5 %) as well as different defects (15 %) like blood spots or uneven first cuts.

In a second approach, the frequencies and the degrees of the destructured areas were recorded during the slicing process of 14 batches of cooked hams consisting of 10 up to 57 bars from the same seven meat-processing companies. Depending on the degree of the defect, the affected slices were allocated to destructurations of grade 1, 2 or 3. Grade 1 occurred in 4.3 % of the slices of the total production, followed by grades 2 and 3 having affected 2.2 % and 0.9 % of the slices, respectively.

Keywords: Cooked cured hams – Destructured areas – Production losses – Meat quality.

LYON SAUSAGE
PRODUCTION WITH NO DATED E-NUMBER ADDITIVES AND LOW SALT CONTENT
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In general, all additives used during boiled-sausage processing have either to be declared by their denominations or by E-numbers. This is often badly received in the market place because a lot of consumers have a negative association with E-numbers. It was therefore the aim of our study to test whether a production of Lyoners without using additives to be declared by E-numbers leads to merchantable Lyoner sausages, also considering a reduction in salt addition.

Thus, nitrite curing salt was replaced by a vegetable powder rich in nitrate (leads to 40 mg sodium nitrate per kg batter) combined with the use of a starter culture. Acerola powder providing “natural” ascorbic acid was used instead of sodium ascorbate. When considering a minimum curing period of 90 to 120 minutes at 45°C, colour development of the experimental Lyoners could be completed. Due to technological (gel formation, suppleness of the batter, exclusion of phosphate), sensory and health reasons, salt supplementation should be limited to 1.6 to 1.8 g per kg batter.

Keywords: Lyoner, cooked sausages, additif, E-number free, nitrate, nitrite, ascorbic acid, acerola, curing, colour formation

BROILER CHICKENS
FARM CONTAMINATION BY CAMPYLOBACTER: IS IT UNAVOIDABLE?
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Campylobacteriosis or toxi-infections of food with the *Campylobacter bacterium* is becoming increasingly frequent, overtaking the number of cases of salmonellosis.

The principal source of these infections is contaminated food, especially undercooked meat, as *Campylobacter* is a common host in the digestive tract of many warm-blooded animals, particularly poultry.

The objective of this study was to identify and quantify the risk factors involved in introducing *Campylobacter* into farms in order to help reduce the number of sets already contaminated on arrival at the slaughterhouse.

Questionnaire investigations were led with broiler breeders surveyed via 200 questions related to the farm characteristics and breeding controls. Samples of 50 fresh caecal droppings were carried out for each farm visited, and presence or absence of *Campylobacter* was assessed.

Campylobacter was found in 54% of the 174 farms, and in at least half of the dropping samples from these contaminated farms.

Several variables were significantly associated with the presence of *Campylobacter* and were described as factors of risk.

Contamination was more frequent when the bird density was higher than 22.5/m² and in summer/autumn. Animal age also appeared as a riskfactor, since the bacterium was mainly present in farms where animals were older than 45 days. Contamination was higher in farms where more than 4 people are working the facilities, particularly when they do not change shoes before entering the building. Siting the delivery at distance from the hopper is also a factor of risk.

Focussing on hygiene measures, contamination was more frequent when the water reserve and drains were detergent-treated, in contrast with pressure-rinsing. Administering treatments through the drinking water actually promotes contamination when no precautions are taken to double-check water quality.

Lastly, both use of an insecticide product and disinfection of the litter were both associated with presence of the bacterium.

Keywords: *Campylobacter*, poultry, biosafety, risk factors

CATTLE CLEANLINESS AT SLAUGHTER
A NEW REQUIREMENT FOR THE SECTOR
BASTIEN D.

The Institut de l'Élevage (French Livestock Institute) has responded to demands from various meat sector professionals by leading a number of studies on the implementation of the Hygiene Package (1st January 2006). Following on from the studies led in 2004 and 2005, the main factors highlighted as being linked to animal cleanliness are animal housing system and housing density, diet management, straw bedding and raking practices, and trough locations. All of the meat sector actors operating under Interbev guidance took this research as the basis for implementing various projects designed to meet the new regulatory requirements, featuring in particular a balanced scorecard system for grading pre-slaughter cattle cleanliness.

Keywords: Cattle cleanliness, slaughter, balanced scorecard