

## **P6: Microbiological characterization on the smoked meat products**

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**Introduction:** Portugal is a country characterized by production of a variety of sausage products. Many of these are subjected to conservation processes, including smoking to promote textures, flavors and bacterial inhibition.

**Objectives:** To microbiologically characterize whole and sliced smoked meat products, analyzed during 2014 at Biogerm Laboratory.

**Materials and Methods:** We conducted a cross-sectional study on 46 records of microbiological quality control of whole (n=22) and sliced (n=24) smoked meat products, performed during 2014. Data included aerobic colony count at 30°C (satisfactory if  $\leq 10^5$  CFU/g, unsatisfactory if  $> 10^5$  CFU/g), coagulase-positive staphylococci, *Clostridium perfringens* and sulphite-reducing clostridia spores (satisfactory if  $\leq 10^2$  CFU/g, unsatisfactory if  $> 10^2$  CFU/g), *Escherichia coli* count (satisfactory if  $\leq 10$  CFU/g, unsatisfactory if  $> 10$  CFU/g), and *Salmonella spp.* and *Listeria monocytogenes* detection (satisfactory if absent in 25g) at the end of manufacturing process. Microbiological quality for smoked meat products it is not regulated, thus criteria was defined by the Laboratory, except for *Salmonella spp.* and *Listeria monocytogenes* which are according with EC Regulation No. 1441/2007. Descriptive statistics were used to analyze unsatisfactory and satisfactory records.

**Results and Discussion:** The results for the pathogenic microorganisms, i.e. coagulase-positive staphylococci, *Clostridium perfringens*, sulphite-reducing clostridia spores, *Escherichia coli*, *Salmonella spp.* and *Listeria monocytogenes* were all satisfactory, both regarding sliced and whole smoked meat products. We registered three (6.5%) non-satisfactory records regarding aerobic colony count at 30°C. Sliced smoked meat products had a higher frequency of non-satisfactory results (8.3% and 4.5%, respectively), possibly because they are subject to greater manipulation and contamination.

**Conclusion:** The microbiological contamination of smoked meat products is reduced, yet valuable. These results are important for risk assessment, stressing the importance of close monitoring of the smoking stages and processing of meat products. Together, these results indicate compliance with hygiene and sanitary recommendations during manufacturing process.

## **References**

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