

PRESENCE OF SELECTED MICROORGANISMS ON MEAT CONTACT SURFACES IN THE MEAT CUTTING FACILITY

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Abstract

The deep muscle tissue of healthy, slaughtered livestock does not contain any, or contain few microorganisms. However, their exterior surfaces (hide, hair, skin, and feathers) and gastrointestinal tracts are naturally contaminated with a variety of microorganisms. From the moment of slaughter, each processing step exhibits the carcass to opportunities for contamination with microorganisms from the exterior surfaces, utensils and equipment and, most importantly, from the gastrointestinal tract. Cutting of carcasses also involves the use of utensils and equipment and transfers microorganisms to the cut surfaces. There is opportunity to contaminate the exposed tissues of the carcass with microorganisms from: exterior surface of the animal, the contents of the gastrointestinal tract, equipment and utensils, worker garments and hands, the slaughterhouse itself (e.g. air, floor drains, water drip from the ceiling), water (and if used, ice), food additives (e.g. spices for value added products).

The aim of this study was to determine the presence of selected microorganisms (total aerobic mesophilic bacteria, total number of *Enterobacteriaceae*, presence of *Listeria monocytogenes*) on meat contact surfaces in the cutting meat facility. The study included 50 samples that were taken from ten meat contact surfaces to a cutting plant. The swabs are tested for five working days, for a period of two weeks. All microbiological examination were conduct according to ISO methods.

For most of the swab samples that do not correspond to the recommended microbiological criteria increased number of aerobic mesophilic bacteria and total *Enterobacteriaceae* was established. *L. monocytogenes* was not found in the tested surfaces in the cutting meat facility.

Considering the great role of education in the improvement of practice at slaughter houses, training for all employees on hygiene in establishments producing meat is recommended.

Key words: Hygiene, Contamination, Microorganisms, Meat cutting, *L. monocytogenes*.