

ASSESSMENT OF MICROBIOLOGICAL SAFETY AND QUALITY IN THE MEAT PROCESSING SECTION OF IULS

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Abstract

Preventing meat contamination under production conditions requires appropriate hygiene and food safety measures. These include implementing rigorous hygiene practices, controlling temperature and humidity during the production process, conducting regular inspections of product quality and safety, and using properly sanitized equipment. Contamination can occur due to a variety of factors, including inconsistent hygiene practices, contaminated equipment, and improper handling. Therefore, this study was initiated to assess the microbiological quality of meat from the main steps of the sausage production flow in the meat processing unit of USV Iasi. Meat samples were taken from six production points (whole carcass, meat trimmings, coarsely ground meat, finely minced meat, minced meat and spice mix, sausages before heat treatment) as well as from the finished product after heat treatment. Microbiological analyses were performed on three culture media: Nutrient Agar, Violet Red Bile Dextrose (VRBD) and Rapid E-coli, to identify the total number of aerobic bacteria and fungi, the colonies belonging to the Enterobacteriaceae family, respectively, for direct confirmation of Escherichia coli colonies. The results showed contamination levels below the detection limit mainly for carcass samples and finished product, values for TAB ranging from 1.1×10^3 cfu/g for sausages before heat treatment and 2.7×10^3 cfu/g for fine minced meat, and values for Enterobacteriaceae ranging from 0.3×10^2 cfu/g for meat trimmings and 2.7×10^2 cfu/g coarsely ground meat. In this study, all samples collected from the meat processing section exhibited minimal counts of spoilage microorganisms, confirming adherence to hygiene rules and good practices.

Key words: meat contamination, microbiological analysis, total aerobic bacteria (TAB)