MORPHOLOGICAL CHARACTERIZATION OF MICROORGANISMS AFFECTING THE FRESHNESS OF CHICKEN MEAT FROM SELECTED MARKETS OF PAVIA, ILOILO

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By

MIGUEL M. CASUMPANG

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ABSTRACT

Microbial contamination of chicken meat remains a widespread concern, often occurring on the meat surface during production and handling. This study aimed to identify bacterial contaminants in chicken meat from selected areas in Pavia, Iloilo by analyzing colony morphology, Gram reaction, catalase activity, CFU counts, and pH levels. Morphological and biochemical from the samples revealed diverse bacterial microbial community. Streptococci and Streptobacillus were common, and Gram staining showed both Gram-positive and Gram-negative bacteria. Catalase tests indicated the presence of both aerobic and anaerobic microbes. Samples A (pH 6–7), D (pH 5–9), and G (pH 8–9) were presumptively *Enterobacter spp.* with gas and H_2S production. Sample E (pH 6–8) matched *Salmonella Typhi* traits, while other samples also showed fermentation activity and H_2S production. CFU counts varied, with samples E, G, and H having the highest loads, particularly on MSA and BHI media. These findings suggest microbial diversity, potential spoilage, and variable hygiene across sources. Observing bacterial morphology and pH changes provides a basis for evaluating meat quality and safety. Further studies using advanced biochemical and serological methods are necessary for accurate pathogen identification and to establish stricter hygiene, handling, and storage protocols in poultry processing.

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