**International Academy of Science,
Engineering and Technology**
Connecting Researchers; Nurturing Innovations

IASET

ASSESSING THE EFFICACY OF NISIN AS A NATURAL ANTIMICROBIAL AGENT IN POULTRY PRODUCTS: A FOCUS ON CHICKEN QUALITY AND SHELF LIFE ENHANCEMENT

Vidya.T[1], Preetam Banerjee[2] & Reshika Nelsiya N[3]

[1]*Department of M.VOC Food Technology and Quality Management Padmashree Institute of Management and Sciences,
Bangalore, Karnataka, India*

[2]*Department of Dairy Science and Food Technology, Institute of Agricultural Sciences, Banaras Hindu University,
Varanasi, Uttar Pradesh, India – 221005*

[3]*School of Food Science and Nutrition, University of Leeds, Woodhouse, Lane, Leeds, United Kingdom*

ABSTRACT

The study on "The Impact of Nisin on Gut Microflora Composition and Diversity" delves into the effects of nisin, a natural antimicrobial peptide, on the intricate ecosystem of gut microflora. Studies have revealed that dietary supplementation of nisin positively influences the gut microbiota by reducing pathogenic bacterial populations in the jejunum and ceca. Additionally, nisin supplementation has been linked to improved feed conversion ratio values and enhanced growth performance in broiler chickens. Nisin supplementation positively affected the microbiota of the gut by reducing potentially pathogenic bacterial populations in the jejunum and ceca. The bacterial fermentation in the jejunum was significantly lowered by nisinaddition. Through a comprehensive analysis of microbial populations in the gut, this research aims to elucidate how nisin influences the composition and diversity of these microbial communities. By the findings shed light on the potential implications of nisin as a modulator of gut microflora and according to the results, it can be considered a natural dietary supplement for broiler chickens.

KEYWORDS: *Dietary Supplements, Microbiota, Antimicrobial*