Commentary
Volume 14:01, 2025

Vitamins & Minerals

ISSN: 2376-1318 Open Access

Effect of Chicken Chemicals on Protein Quality

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Introduction

Silkie chickens have long piqued the interest of poultry aficionados all around the world due to their unusual appearance and special characteristics.Silkie hens have become more well-known for their possible health advantages beyond their aesthetic appeal, especially in traditional Chinese medicine, where they are valued for their alleged therapeutic qualities. In-depth studies of the bioactive substances found in Silkie hens have recently been conducted, revealing their effects on meat quality and clarifying the underlying gene regulation networks. This essay investigates the importance of Silkie hens in contemporary agriculture and human health as well as the hidden gems they contain [1].

Carnosine and anserine, which are found in Silkie chicken meat, help hold onto moisture while cooking, making the meat juicy and flavorful. By acting as organic water-binding agents, these substances stop moisture loss and provide a soft, moist finished product. The unique flavor profile of Silkie chicken flesh is also influenced by the bioactive substances that are contained in it.Particularly, carnosine has been linked to umami taste, which enhances the meat's overall flavor by adding depth and richness. Silkie chicken meat's sensory qualities are further enhanced by the combination of special peptides and amino acids, which makes it a highly sought-after culinary component.Researchers may now examine the underlying gene regulation networks linked to the bioactive substances found in Silkie chicken flesh thanks to recent developments in molecular biology.

Description

In addition to being a source of protein, silkie chicken meat has a number of bioactive substances that may have health advantages. Numerous bioactive substances, such as carnosine, anserine, collagen, and special peptides, have been found in Silkie chicken meat.Silkie chicken meat contains high levels of the dipeptides carnosine and anserine. These substances have been connected to a number of health advantages, such as anti-inflammatory, antioxidant, and maybe neuroprotective qualities. Silkie chicken flesh is an excellent nutritional item for supporting general health and well-being because of its high levels of carnosine and anserine. Another important bioactive substance that is prevalent in Silkie chicken flesh is collagen. Collagen is essential for supporting general tissue integrity, fostering joint function, and preserving skin health. Silkie chicken meat is a beneficial addition to the diet for people looking to improve their general health and vitality because it may help with wound healing, joint health, and skin elasticity [2].

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Received: 02 January, 2025, Manuscript No. VTE-25-164256; **Editor Assigned:** 04 January, 2025, PreQC No. P-164256; **Reviewed:** 16 January, 2025, QC No. Q-164256; **Revised:** 21 January, 2025, Manuscript No. R-164256; **Published:** 28 January, 2025, DOI: 10.37421/2376-1318.2025.14.348

Silkie chicken meat contains unique peptides that exhibit various bioactive properties, including antimicrobial, antihypertensive and immunomodulatory effects. These peptides hold promise for the development of functional foods and nutraceuticals aimed at promoting human health and preventing disease. In addition to their health-promoting properties, the bioactive compounds present in Silkie chicken meat also play a significant role in determining meat quality. Studies have shown that Silkie chicken meat possesses desirable characteristics such as tenderness, juiciness and flavour due to its unique composition of bioactive compounds. The high levels of collagen in Silkie chicken meat contribute to its tender texture, making it a preferred choice for culinary purposes. Collagen undergoes hydrolysis during cooking, resulting in the formation of gelatin, which enhances the tenderness and succulence of the meat [3].

Researchers have discovered genes and pathways linked to the creation and metabolism of bioactive substances in Silkie chicken tissues by employing methods including RNA sequencing and gene expression profiling. The genetic foundation of meat quality characteristics and the control of important metabolic pathways involved in the manufacture of bioactive compounds have both been better understood thanks to these investigations. The expression of genes involved in the production and metabolism of bioactive compounds is largely controlled by transcription factors. Researchers can find possible targets for genetic modification to increase the production of desired bioactive chemicals in Silkie chicken meat by describing the transcriptional regulatory networks that control these activities. In Silkie chicken tissues, epigenetic changes like DNA methylation and histone modifications also affect gene expression patterns and help control the manufacture of bioactive compounds.Gaining insight into the epigenetic mechanisms that underlie these processes could open up new possibilities for boosting the nutritional content and meat quality of Silkie chicken products.The identification of bioactive substances in Silkie hens and the clarification of their effects on gene regulation networks and meat quality have important ramifications for human health and agriculture. Research on Silkie chickens can provide valuable insights for breeding programs that aim to produce poultry with improved nutritional value and meat quality. In order to satisfy consumer demand for healthier and more flavorful options, producers can make poultry products by carefully selecting birds with favorable genetic features linked to the synthesis of bioactive compounds [4,5].

Conclusion

Potential health advantages of consuming Silkie chicken meat enhanced with bioactive substances include anti-inflammatory and antioxidant protection as well as support for the health of the skin and joints.By lowering the risk of chronic illnesses like osteoarthritis, neurological diseases, and cardiovascular disease, consuming Silkie chicken products may enhance general health and wellbeing. Silkie hens are more than simply a beautiful breed; they are also stores of bioactive substances that have a variety of health-promoting qualities. The significance of investigating traditional livestock breeds for their potential benefits to agriculture and human health is highlighted by the discovery of these chemicals and their effects on meat quality and gene regulation networks.

Acknowledgement

None.

Conflict of Interest

There are no conflicts of interest by author.

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How to cite this article: Pauls, Kanno. “Effect of Chicken Chemicals on Protein Quality.” *Vitam Miner* 14 (2025): 348.