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Consumption of Rabbit Meat as a Benefit for the Population as an Ecological Product

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Abstract:

The enticement of rabbit meat stems mostly from a global trend: an increased interest in healthy eating. Rabbit meat, as a food product, aligns with the modern notion of a healthy lifestyle. Environmental problems, which often result in allergies in children, have led to the demand for dietary foods using rabbit meat. Rabbit meat is an excellent dietary product that is perfectly digestible (96%, while beef or pork is up to 60%). Rabbit meat is better to nearly all other meats in terms of vitamin and mineral makeup. Iron, magnesium, potassium salts, phosphorus, B vitamins, and other minerals are present. Rabbit meat has the highest protein content, lowest fat content, and lowest cholesterol of any animal food. Meat is more readily absorbed by the body and is quickly chewed and digested by the stomach fluids. Extreme vocations such as pilots, divers, sportsmen, employees in dangerous sectors, and those living in toxic regions can also benefit from it. Rabbit meat is recommended for children; it is included in baby food for the little ones. Especially in rabbit meat, toxicological indicators are provided for quality and approval for consumption. As a valuable and safe product in the food market, the concentration of antibiotics, pesticides, and heavy metals in meat is a highly essential indicator of the meat's composition.

Keywords: *meat, ecological product, toxicological indicators, antibiotics, pesticides, radionuclides.*

Introduction

Meat quality is a multifaceted notion that is often evaluated using a combination of experimental measurements of raw or cooked meat properties, scores assigned by a trained taste panel, and muscle features verified chemically and histologically. Water-holding capacity, color evaluation on the surface of fresh-cut muscle, cooking loss, and pH measurement the day after slaughter are the traditional components that determine the meat's technological and culinary quality. Recent evidence clearly indicates that the primary factors influencing customer choice are sensory attributes and the hygienic condition of animal farming systems (Hernandez & Gondret, 2006; Arvanitoyannis, Kotsanopoulos, & Savva, 2017). However, many customers assume that referred to as 'white meats', such as rabbit meat, are somewhat healthier.

The meat of rabbits is lean, digestible, and high in physiologically essential proteins. It also includes considerable levels of vital amino acids and long-chain unsaturated fatty acids as well, the major of which is linoleic acid (Wood, & Enser, 1997). The breed, age, and sex of the rabbit all have an impact on the fatty acid composition of the meat. However, the primary factor influencing the fat structure of the meat is the diet that the animals are fed. Meat's fatty acid composition may be improved quite fast and efficiently by suitable nutrition, it will affect the final meat processed products such as cured meat, formed meats (Wood et al., 2008; Dissanayake et al., 2023a; Dissanayake et al., 2023b; Dissanayake, Rifky, & Samadiy, 2023c; Pereira & Vicente, 2013). Because of its high nutritional value, meat is a vital part of a healthy, balanced diet and has been important to human evolution.

This study looks at several negative stereotypes about meat eating and tries to summarize the function and significance of meat in human nutrition (Pereira & Vicente, 2013; Kumara, Rifky, & Samadiy, 2023; Wu et al., 2023). Meat has high levels of protein, iron, zinc, selenium, phosphorus, and vitamin B12. It also contains extra B complex vitamins (Ahmad, Imran, & Hussain, 2018; De Smet, 2012). Despite their diversity, all B vitamins have one thing in common: they help improve metabolism in the human body and normalize the functioning of the immune and nervous systems. Rabbit raising is an important sector of the national economy, with the goal of not only solving the food crisis but also providing high-quality dietary goods to the populace. Its value has increased significantly in the way of import substitution. Rabbit farming and rearing is a type of livestock breeding in which the precocious animals are reared to produce meat with some other products at cheap feed, labor, and financial expenses (Rifky, 2016; Rifky et al., 2024).

The nutritional value of rabbit meat distinguishes it from other forms of meat. The ability to consume freshly chilled rabbit meat throughout the year boosts its nutritional value. As you know, rabbits' productive indices and the high standard of their meals to a greater extent depend on a comprehensive, balanced diet with regards to of energy, nutrients and minerals. However, the breeding and care of these animals is now best researched in rabbit breeding, and feeding concerns are much less explored, as is the use of various feed additives in feeding rabbits.

Rabbit meat has the lowest levels of cholesterol, lipids, and collagen of any animal meat, as well as the least amount of fat and the most protein. In fact, some canned foods may have different types of antibiotics like the tetracycline group or grisin, but accordingly taking into account the permissible norms. In addition Heavy metals cause cardiovascular diseases, severe allergies, and even have carcinogenic properties. They affect the genetic background, as they accumulate in the body with a subsequent effect, manifested in hereditary diseases, mental disorders, etc. Meat products may contain hazardous levels of mercury, arsenic, lead and cadmium from farm animal carcasses (Ataxodjayeva et al., 2023; Chiles & Fitzgerald, 2018; Dissanayake et al., 2024; Otakuziyev et al., 2023; Abdullayev et al., 2023).

Materials and Methods

The chemical composition is primarily used to identify significant compounds, namely lipids and amino acids, as well as essential micronutrients and physiologically active molecules. Most of them need to support the body's metabolism and be in a healthy balance. Since rabbit meat has a low fat and cholesterol content, a high biological value, and is soft, nutritionists recommend include it in the diet for conditions involving the stomach, biliary tract, liver, allergies, and other conditions (Ataxodjayeva et al., 2023). "Rabbit" denotes flesh that is white. It offers a complete spectrum of vitamins, minerals, and proteins. Compared to lamb, beef, pig, and veal, it provides greater protein.

Meat from rabbits is low in calories. There are little sodium salts in rabbit flesh. Because the human body absorbs 90% of rabbit meat and just 62% of beef, rabbit meat is among the most digestible meats. We were able to choose the most competitive and in-demand canned food substitute among the many kinds of products in the assortment group by using the data that was gathered and

analyzed. Based on the findings of the above analyses, we may thus draw the conclusion that non-traditional ingredients, including olive oil and amaranth flour, are used in minced rabbit to improve its unique softness and capacity to bind moisture for functional and technical aspects. Using rabbit meat, we produce two different kinds of final goods. There is stew and pate among them.

The most common method for determining antibiotics, pesticides, heavy metals, as well as radionuclides are tests that can provide results in a short time. It has been established that rabbit meat not only has a high protein composition and high mineral content, but also meets the safety criteria for consumption. High concentrations of mercury and arsenic in meat are rare; these metals and their compounds are most often found in seafood and fish. But lead and cadmium concentrations are often excessively high (Otakuziyev et al., 2023; Abdullayev et al., 2023). Most often this is due to the fact that animals grazed in meadows and pastures located near major highways or production facilities. Lead can accumulate in the human body and provoke pressure surges, cardiovascular diseases, serious gastrointestinal pathologies, and in children – problems in the functioning of the nervous system (Wu et al., 2022).

Results and Discussion

All these indicators of products are water-soluble and are quickly eliminated from the body without accumulating in it. This means that it is necessary to replenish their reserves, rich in protein composition, with these substances and can be having functional properties can be improved by having incorporated with animal products (Rifky, Serkaev, & Samadiy, 2023; Rifky et al., 2024). To compare the indicators in Table 1 in addition to the composition of rabbit meat. This shows that the tested indicators of the finished products are absolutely safe and the water content in all types of meat does not differ significantly.

Canned food accounts for a sizable portion of consumer items. Their technology is distinguished by high raw material quality requirements, softer heat treatment modes, the elimination of direct contact with air oxygen (at various stages of processing), and the ability to balance the chemical composition of the finished product by incorporating natural biologically active substances into the formulation (Rifky, Serkaev, & Samadiy, 2023; Rifky et al., 2024).

When developing manufacturing technology, current ideas of the complex utilization of raw materials were used to the construction of multicomponent food systems with specific goals. The technical scheme for producing meat-containing canned meals for children.

Table 1. Toxicological indicator of harmfulness

Chemical indicators	Control	pate	stew
Cadmium	not found	not found	not found
Plumbum	not found	not found	not found
Mercury	not found	not found	not found
Arsenic	not found	not found	not found
Antibiotics, units/g:			
chloramphenicol	not found	not found	not found
tetracycline group	not found	not found	not found
Grizin	not found	not found	not found
bacitracin	not found	not found	not found
Pesticides, mg/kg:			
hexochlorocyclohexane	not found	not found	not found
(alpha, beta, gamma isomers)	not found	not found	not found
DDT and its metabolites	not found	not found	not found

Radionuclides, Bq/kg:			
Cesium-137	not found	not found	not found
Strontium-90	not found	not found	not found

It has been identified that the tested samples were not showing any toxic chemical indicators in the damples including contro. It shows that the rabbit meat products which we have tested is safe for human consumption and obey the limits of the food safety standards. in our case, not a single toxicological indicator was found during the testing process

Conclusions

It has been established that rabbit meat not only has a high protein composition and high mineral content, but also meets the safety criteria for consumption.

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