

Needs of Meat Products Facilities

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Received Date: June 05, 2025; **Accepted Date:** June 16, 2025; **Published Date:** June 28, 2025

Citation: Fahim Aziz Eldein Shaltout, (2025), Needs of Meat Products Facilities, *Clinical Medical Reviews and Reports*, 7(3); DOI:10.31579/2690-8794/260

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Abstract

There is a wide range of food ingredients wholesale used in meat products, which are divided into four main categories according to the different functional roles they play in food. Natural vegetable fiber ingredients have strong gelling properties. Antioxidants and preservatives for meat are used to improve the preservative properties of meat and prevent meat spoilage, etc. Meat additives such as starch, emulsifiers and stabilizers, such as gelling agents in food, facilitate food processing and improve the texture of processed meat. Meat additives such as meat flavor enhancers, meat food coloring, and spices improve the color and flavor of food, such as natural shelf-life extenders. Transglutaminase for sale: Increase the nutritional value of food minerals, vitamins and other food additives. ACE Ingredients Meats Preservatives & Additives FAQs

Keywords: food ingredients; antioxidants; preservatives; starch; emulsifiers; stabilizers; gelling agents

Introduction

The difference between a preservative and an additive, Meat additive including preservatives for meat and other types. According to different types of meat additives, they improve the quality of food, Food additives used in various processed meat improve processing conditions, prevent food spoilage, and natural shelf life extenders of food has an extremely important role (1,2,3,4,5,6 and 7). The difference between food additive and food ingredient. Food ingredients and food additives are mainly related to the sources, uses and functions of the two are similar, often used in conjunction with each other, and sometimes can be substituted for each other, and their effects may have a multiplying effect or cancel each other out. p. meat color additives, Meat color additives is to improve the color of the product, according to its different coloring mechanisms can be divided into two categories of colorants, pigments (8,9,10,11,12,13 and 14). Meat food coloring commonly used nitrite, sodium nitrate, sodium nitrate and other provisions of sodium nitrate and potassium nitrate cured meat products, marinated meat products, smoked, roasted, grilled meat, fried meat, Western ham, meat sausage, fermented meat products. Additives used for meat coloring are called meat color additives, and their purpose is to increase the appetite for food and stimulate appetite. Meat color additives is divided into two categories according to the source: synthetic coloring and natural coloring (15,16,17,18,19,20 and 21).

Home Ingredients

Home Ingredients Natural, Free-From & Functional Ingredients ‘Meeting’ The Time Challenge: Extending Shelf-Life In Meat ‘Meeting’ The Time Challenge: Extending Shelf-Life in Meat (22,23,24,25,26,27 and 28). Meeting’ The Time Challenge Extending Shelf Life In Meat Preservation has long been critical to meat processors and today, shelf-life is top of the agenda. Consumers are demanding for more natural solutions than artificial ones to keep meat fresh and reduce waste, and one such solution is through lactates natural, clean label ingredients. (29,30,31,32,33,34 and 35). Food waste is a growing problem for the international community with one third of the food produced for human consumption—approximately 1.3 billion tonnes—being wasted every year. In addition, of the 263 million tonnes of meat produced globally each year, 20 percent is lost or wasted despite its high economic cost (36,37,38,39,40,42 and 43). Food trade is becoming progressively more globalised for most countries, as more and more food manufacturers attempt to reach different markets. This inevitably forces supply chains to become larger and more complex. As such, vulnerable produce including meat, which typically has a short shelf-life, is required to stay fresh for longer (44,45,46,47,48,49 and 50). Meat wastage occurs throughout the entire supply chain, be it during agricultural production, post-harvest handling and storage, processing and packaging, distribution or consumption. This may be due to a number of reasons including degradation, poor inventory management or not meeting specifications for quality. The latter is particularly true at the retail level (51,52,53,54,55,56 and 57). Consequently, food often does not even make it into shopping baskets. Food

retailers and supermarkets therefore require products to maintain the desired visual appearance, smell and other quality elements for longer durations whilst on the supermarket shelf to reduce waste and improve economies of scale (58,59,60,61,62,63 and 64). As with other perishable food products, advancements in ingredient technology for meat are allowing meat processors to increasingly extend shelf-life to meet the demands of retailers (65,66,67,68,69,70 and 71).

Popular Ways to Extend Shelf-Life

Shelf-life depends on the degradation mechanism of the specific product. Meat, in particular, can be influenced by several different factors including heat, moisture and contamination by micro-organisms. As such, there are several options when it comes to shelf-life extension (72,73,74,75,76,77 and 78). Salting is one of the most common and ancient ways of preserving meat. Via absorption, the salt draws out any moisture from the meat and creates an environment inhospitable to bacteria. This extends the meat's shelf-life by preventing meat spoilage. The more salt is added to the product, the longer the preservative effect. The same is also true for sugar, which is often added to food as an alternative to avoid the strong flavour inherent to salt (79,80,81,82,83,84 and 85). Similarly, artificial food additives such as nitrites and benzoates can be used to preserve meat due to their antimicrobial effect. They may also act as antioxidants, making meat more acidic, reducing the moisture level, thus slowing down the ripening process and preventing the growth of microorganisms—all of which help the meat last longer (86,87,88,89,90,91 and 92). Other common ways of controlling shelf-life include refrigeration, freezing and packaging. Refrigeration is the obvious solution to controlling meat's exposure to heat. The idea behind this method is to slow down bacterial action so that it takes food much longer to spoil. In the case of freezing, the aim is to stop bacterial action altogether, since frozen bacteria are completely inactive. In addition, neither refrigeration nor freezing are likely to have an effect on the food's taste or texture (93,94,95,96,97,98 and 99). In traditional meat handling, fresh meat is generally not packaged at all. However, this customary system has gradually become outmoded since more time is needed between slaughtering and final consumption. Meat frequently has to be stored, transported, prepared and distributed through a retailer or supermarket, all of which are considerably time consuming. As such, many varieties of packaging have been developed to safeguard meat throughout this extended process (100,101,102,103,104,105 and 106). The primary purpose of packaging is to protect foodstuffs from contamination by dirt and micro-organisms. This can be done by simply wrapping the meat in film, allowing air to the meat but protecting it from physical contamination for approximately one to two days. More advanced techniques, however, such as modified atmosphere packing or vacuum packing can extend shelf-life up to 10 days, by preventing oxidation (107,108,109,110,111,112 and 113).

Effect Of Current Market Trends

There are several market trends which drive changes in meat preservation. For instance, global research shows how the clean label trend has gained pace in many regions. The demand for additive-free, natural foods is accelerating day by day and shows no sign of abating (114,115,116,117,118,119 and 120). Preservatives are a recurring topic in public discussions, with many consumers associating them with harmful chemicals. When it comes to on-pack messaging, free-from and naturally-derived ingredients are a key differentiator for many label-conscious consumers (121,122,123,124,125,126 and 127). As such, global organisations have set out detailed labelling systems for food additives to enable customers to make informed choices with regard to foods containing preservatives.

Manufacturers are therefore increasingly considering what ingredients to use in their formulations, as well as how they label them on the pack, as they seek to stand out from the competition (128,129,130,131,132,133 and 134). Overlapping with this demand is the trend for healthy eating. With mounting evidence for excessive sodium intake leading to high blood pressure and heart disease, there is considerable pressure from scientists and public health authorities for mandatory salt limits. At the same time, awareness of the nutritional effect of excess sugar is having a similar impact, encouraging food manufacturers to reformulate their recipes (135,136,137,138,139,140 and 141). At the same time, consumer demand for 'fresh' products is rising. Alongside the popularity of convenience foods, consumers increasingly expect freshness on demand, with it being intrinsic to quality perception. A significant factor affecting consumers' quality perception of meat is its appearance. Macroscopic meat aspects like colour are important visual cues which consumers often correlate to product freshness. In addition to signifying quality, freshness is also perceived as the most helpful factor in assessing safety at the time of purchase (142,143,144,145,146,147 and 148).

The Reformulation Challenge

Fresh beef with (right) and without (left) lactates. Reformulating to adhere to consumer trends can create significant challenges for meat manufacturers. Aside from influencing shelf-life, ingredients such as salt also enhances flavour and imparts a certain texture and mouth feel, contributing to the overall sensory properties in processed meat (149,150,151,152,153,154 and 155). As a result, the removed or reduced ingredient must be replaced by an alternative ingredient which not only extends product shelf-life, but also stabilises recipes and enhances taste and texture. Moreover, the ongoing trend toward natural, additive-free products poses an ever greater challenge, as it further reduces the amount of salt alternatives available on the market (156,157,158,159,160,161 and 162). Natural, non-sodium ingredients are a viable option to replace salt and chemical preservatives in food products. One such solution for this is organic acid-based salts, such as potassium lactate, that are often used in fresh and cooked meat products to extend shelf-life and increase food safety. Lactate solutions have a bacteriostatic effect on meat, inhibiting the growth of microorganisms and increasing the dormant phase of bacterial growth. This is achieved by reducing water activity and lowering bacterial metabolism, lengthening shelf-life by 50 to 100 percent. Using such ingredients is one way of meeting today's shelf-life requirements, providing extra flexibility for retailers and convenience for consumers. Besides preservation, lactates can also maximise the quality of meat products. They can help meat manufacturers meet reformulation challenges head on as they deliver the salty taste of processed meat products, whilst allowing them to decrease actual sodium levels (161,162,163,164,165 and 166). In addition to this, they also improve the overall quality of meat by enhancing tenderness and juiciness, overcoming some of the issues associated with the removal of salt. As such, meat formulated with lactates exhibit increased sliceability characteristics by increasing breaking strength, cutting shear force, hardness and springiness. Inclusion of lactates in meat also slows the degradation of myoglobin into metmyoglobin, whose presence is commonly associated with the red colour of fresh meat. Adding lactates would improve colour retention. This is most significant in fresh beef, where tests have shown that the use of lactates can preserve red meat colour for up to six additional days (22,23,24,25,26,27 and 28).

Extending shelf-life the natural way

In line with consumers turning away from food products containing unfamiliar or 'chemical sounding' additives, food producers are exploring natural options for food ingredients that are sustainable, reliable and maintain

product quality throughout its shelf-life. Label-friendly ingredients are one example that offers a viable alternative. Produced from natural raw materials such as cane and corn sugar, through natural fermentation, these can improve the overall quality including prevention of bacterial growth. When blended with a source of acetic acid, such as vinegar, these natural ingredients act as a highly effective barrier against pathogen growth, such as *Listeria* (17,18,19,20,21,22 and 23). In addition to improving overall quality, including antimicrobial performance, these ingredients also meet the demand for decreased sodium content, while simultaneously improving the sensory profile of the meat. The addition of vinegar to fresh pork and poultry products can equally contribute to maintaining colour uniformity and reducing grey discoloration during shelf-life (32,33,34,35,36,37 and 38).

Conclusion

Meat products provide a perfect environment for microbial growth, due to their high moisture content and rather neutral pH. However, the requirements for longer shelf-life of meat products, be it fresh meat or cooked ready-to-eat products, are multiplying, thanks to longer and more complex food supply chains. As a result, food is required to stay fresher for increasing amounts of time. At the same time, traditional methods of preservation, such as salting and the use of artificial food additives, are insufficient in meeting today's consumer demands for fresh and healthy products. It is therefore vital, that product developers carefully consider the ingredients available to them when reformulating their recipes. They can now access label-friendly solutions such as lactates to control microbial spoilage, increase shelf-life and enhance the overall quality of meat, all while satisfying consumer demand for clean and healthy products.

Conflicts of Interest

The authors declare no conflicts of interest.

References:

- Shaltout, F.A., Riad, E.M., and AbouElhassan, Asmaa, A (2017). prevalence Of Mycobacterium Tuberculosis in Imported cattle Offal and Its lymph Nodes. *Veterinary Medical Journal -Giza (VMJG)*, 63(2): 115 – 122.
- Shaltout, F.A., Riad, E.M., and Asmaa Abou-Elhassan (2017). Prevalence Of Mycobacterium Spp. In Cattle Meat and Offal's Slaughtered in And Out Abattoir. *Egyptian Veterinary medical Association*, 77(2): 407 – 420.
- Abd Elaziz, O., Fatin S. Hassanin, Fahim A. Shaltout and Othman A. Mohamed (2021). Prevalence of Some Foodborne Parasitic Affection in Slaughtered Animals in Local Egyptian Abattoir. *Journal of Nutrition Food Science and Technology* 2(3): 1-5.
- Abd Elaziz, O., Fatin, S Hassanin, Fahim, A Shaltout, Othman, A Mohamed (2021). Prevalence of some zoonotic parasitic affections in sheep carcasses in a local abattoir in Cairo, Egypt. *Advances in Nutrition & Food Science* 6(2): 6(2): 25-31.
- Al Shorman, A.A.M.; Shaltout, F.A. and hilat, N (1999). Detection of certain hormone residues in meat marketed in Jordan. *Jordan University of Science and Technology*, 1st International Conference on Sheep and goat Diseases and Productivity, 23-25.
- Ebeed Saleh, Fahim Shaltout, Essam Abd Elaal (2021). Effect of some organic acids on microbial quality of dressed cattle

- carcasses in Damietta abattoirs, Egypt. *Damanhour Journal of Veterinary Sciences* 5(2): 17-20.
- Edris A, Hassanin, F. S; Shaltout, F.A., (2017). Microbiological Evaluation of Some Heat-Treated Fish Products in Egyptian Markets. *EC Nutrition* 12.3 (2017): 124-132.
- Edris, A., Hassan, M.A., Shaltout, F.A. and Elhosseiny, S (2013). Chemical evaluation of cattle and camel meat. *Benha Veterinary Medical Journal*, 24(2): 191-197.
- Edris, A.M., Hassan, M.A., Shaltout, F.A. and Elhosseiny, S (2012). Detection of *E. coli* and *Salmonella* organisms in cattle and camel meat. *Benha Veterinary Medical Journal*, 24(2): 198-204.
- Edris A.M.; Hemmat M. I., Shaltout F.A.; Elshater M.A., Eman F.M.I. (2012). Study on incipient spoilage of chilled chicken cuts-up. *Benha veterinary medical journal*, VOL. 23, NO. 1: 81-86.
- Edris A.M.; Hemmat M.I.; Shaltout F.A.; Elshater M.A., Eman, F.M.I. (2012). chemical analysis of chicken meat with relation to its quality. *Benha veterinary medical journal*, 23(1): 87-92.
- Edris, A.M.; Shaltout, F.A. and Abd Allah, A.M. (2005). Incidence of *Bacillus cereus* in some meat products and the effect of cooking on its survival. *Zag. Vet. J.* 33 (2):118-124.
- Edris, A.M.; Shaltout, F.A. and Arab, W.S. (2005). *Bacterial Evaluation of Quail Meat*. *Benha Vet. Med.* 16 (1):1-14.
- Edris, A.M.; Shaltout, F.A.; Salem, G.H. and El-Toukhy, E.I. (2011). Incidence and isolation of *Salmonellae* from some meat products. *Benha University, Faculty of Veterinary Medicine, Fourth Scientific Conference Veterinary Medicine and Food Safety* 172-179 benha, Egypt.
- Edris AA, Hassanin, F. S; Shaltout, F.A., Azza H Elbaba et al. (2017). Microbiological Evaluation of Some Heat Treated Fish Products in Egyptian Markets. *EC Nutrition* 12.3 (2017): 134-142.
- Edris, A.M.; Shaltout, F.A.; Salem, G.H. et al. (2011). Plasmid profile analysis of *Salmonellae* isolated from some meat products. *Benha University, Faculty of Veterinary Medicine, Fourth Scientific Conference Veterinary Medicine and Food Safety* 194-201 benha, Egypt.
- Ragab A, Abobakr M. Edris, Fahim A.E. Shaltout, Amani M. Salem (2022). Effect of titanium dioxide nanoparticles and thyme essential oil on the quality of the chicken fillet. *Benha Veterinary Medical Journal* 41(2): 38-40.
- Hassan, M.A, Shaltout, F. A, Arfa M.M, et al. (2013). Biochemical studies on rabbit meat related to some diseases. *Benha veterinary medical journal* 25(1):88-93.
- Hassan, M.A and Shaltout, F.A. (1997). Occurrence of Some Food Poisoning Microorganisms In Rabbit Carcasses *Alex.J.Vet.Science*, 13(1):55-61.
- Hassan M, Shaltout FA* and Saqr N (2020). Histamine in Some Fish Products. *Archives of Animal Husbandry & Dairy Science* 2(1): 1-3.
- Hassan, M.A and Shaltout, F.A. (2004). Comparative Study on Storage Stability of Beef, Chicken meat, and Fish at Chilling Temperature. *Alex.J.Vet.Science*, 20(21):21-30.
- Hassan, M.A; Shaltout, F.A.; Arafa, M.M. ; Mansour, A.H. and Saudi, K.R.(2013). *Biochemical studies on rabbit meat related to some diseases*. *Benha Vet. Med.* 25 (1):88-93.

23. Hassan, M.A; Shaltout, F.A.; Maarouf, A.A. and El-Shafey, W.S.(2014). Psychrotrophic bacteria in frozen fish with special reference to pseudomonas species. *Benha Vet. Med.J.27* (1):78-83.
24. Hassan, M.A; Shaltout, F.A. ; Arafa, M.M. ; Mansour, A.H. and Saudi , K.R.(2013). Bacteriological studies on rabbit meat related to some diseases *Benha Vet. Med.J.25* (1):94-99.
25. Hassanin, F. S; Hassan, M.A., Shaltout, F.A., Nahla A. Shawqy and 2Ghada A. Abd-Elhameed (2017): Chemical criteria of chicken meat. *Benha Veterinary Medical Journal*, 33(2):457-464.
26. Shaltout, F. A. (2024). Egyptian Medicinal Plants and Respiratory Disease. *Journal of Agriculture and Education Research*. 2 (3), 1-7.
27. Hassanin, F. S; Hassan, M.A; Shaltout, F.A. and Elrais-Amina, M(2014). Clostridium perfringens in vacuum packaged meat products. *Benha veterinary medical journal*, 26(1):49-53.
28. Hassanien, F.S.; Shaltout, F.A.; Fahmey, M.Z. and Elsukkary, H.F. (2020). Bacteriological quality guides in local and imported beef and their relation to public health. *Benha Veterinary Medical Journal* 39: 125-129.
29. Hassanin, F. S; Shaltout,F.A. and, Mostafa E.M(2013). Parasitic affections in edible offal. *Benha Vet. Med.J.25* (2):34-39.
30. Hassanin, F. S; Shaltout, F.A., Lamada, H.M., Abd Allah, E.M. (2011): the effect of preservative (nisin) on the survival of listeria monocytogenes. *Benha veterinary medical journal*. Special Issue [I]: 141-145.
31. Shaltout FA. (2024). Dry-Aged Meat and their Importance. *Open J of Frail Sci*, 2(1): 000111.
32. Khattab, E.,Fahim Shaltout and Islam Sabik (2021). Hepatitis A virus related to foods. *Benha Veterinary Medical Journal* 40(1): 174-179.
33. Shaltout, F. A. (2024). Human Parasites in Relation to Contaminated Food and Drinking Water. *J Biomed Sci Biotech Res*. 2024. 2(1): 1-5.
34. 3Saad M. Saad, Fahim A. Shaltout, Amal A. A. Farag & Hashim F. Mohammed (2022). Organophosphorus Residues in Fish in Rural Areas. *Journal of Progress in Engineering and Physical Science* 1(1): 27-31.
35. Shaltout FAE. (2025). Everything about Nutritional Value of the Meat Ingredients and How we can Reduce its Microbial Hazards. *J Vet Sci Res*, 10(1): 000283.
36. Saif,M. , Saad S.M., Hassanin, F. S; Shaltout FA, Marionette Zaghloul (2019). Molecular detection of enterotoxigenic Staphylococcus aureus in ready-to-eat beef products. *Benha Veterinary Medical Journal* 37 7-11.
37. Saif,M. , Saad S.M., Hassanin, F. S; Shaltout, F.A., Marionette Zaghlou (2019). Prevalence of methicillin-resistant Staphylococcus aureus in some ready-to-eat meat products. *Benha Veterinary Medical Journal* 37 12-15.
38. Farag, A. A., Saad M. Saad¹, Fahim A. Shaltout¹, Hashim F. Mohammed (2023 a). Studies on Pesticides Residues in Fish in Menofia Governorate. *Benha Journal of Applied Sciences*. 8(5): 323-330.
39. Shaltout, F. A. (2024). The concept of meat analysis in economy and public health, *Dietary Nourishment and Food Processing Techniques* (DNFPT) 1(1) 1-7.
40. Farag, A. A., Saad M. Saad¹, Fahim A. Shaltout¹, et al. (2023). Organochlorine Residues in Fish in Rural Areas. *Benha Journal of Applied Sciences*, 8 (5): 331-336.
41. Shaltout, F.A., Mona N. Hussein, Nada Kh. Elsayed (2023). Histological Detection of Unauthorized Herbal and Animal Contents in Some Meat Products. *Journal of Advanced Veterinary Research* 13(2): 157-160.
42. Shaltout, F. A., Heikal, G. I., Ghanem, A. M. (2022). Mycological quality of some chicken meat cuts in Gharbiya governorate with special reference to Aspergillus flavus virulent factors. *benha veteriv medical journal veterinary* 42(1): 12-16.
43. Shaltout, F.A., Ramadan M. Salem, Eman M. Eldiasty, Fatma A. Diab (2022). Seasonal Impact on the Prevalence of Yeast Contamination of Chicken Meat Products and Edible Giblets. *Journal of Advanced Veterinary Research* 12(5): 641-644.
44. Shaltout, F.A., Abdelazez Ahmed Helmy Barr and Mohamed Elsayed Abdelaziz (2022). Pathogenic Microorganisms in Meat Products. *Biomedical Journal of Scientific & Technical Research* 41(4): 32836-32843.
45. Shaltout, F.A., Thabet, M.G. and Koura, H.A. (2017). Impact of Some Essential Oils on the Quality Aspect and Shelf Life of Meat. *J Nutr Food Sci.*, 7: 647.
46. Shaltout, F.A., Islam Z. Mohammed², El -Sayed A. Afify (2020). Bacteriological profile of some raw chicken meat cuts in Ismailia city, Egypt. *Benha Veterinary Medical Journal* 39 11-15.
47. Shaltout, F.A.,Islam, Z. Mohammed², El -Sayed A. Afify (2020). Detection of E. coli O157 and Salmonella species in some raw chicken meat cuts in Ismailia province, Egypt. *Benha Veterinary Medical Journal* 39 101-104.
48. Shaltout, F.A., E.M. El-diasty and M. A. Asmaa- Hassan (2020). Hygienic Quality of Ready to Eat Cooked Meat in Restaurants at Cairo. *Journal of Global Biosciences* 8(12): 6627-6641.
49. Shaltout, F.A., Marrionet Z. Nasief, L. M. Lotfy, Bossi T. Gamil (2019). Microbiological status of chicken cuts and its products. *Benha Veterinary Medical Journal* 37 57-63.
50. Shaltout, F.A. (2019). Poultry Meat. *Scholarly Journal of Food and Nutrition* 22 1-2.
51. Shaltout, F.A. (2019). Food Hygiene and Control. *Food Science and Nutrition Technology* 4(5): 1-2.
52. Hassanin, F. S; Shaltout, F.A., Seham N. Homouda and Safaa M. Arakeeb (2019). Natural preservatives in raw chicken meat. *Benha Veterinary Medical Journal* 37 (2019) 41-45.
53. Shaltout, D. E. (2024). Additives Extend the Food Shelf Life by Addition of Preservatives Nitrate, and Nitrite to Food, *Dietary Nourishment and Food Processing Techniques*, 1(3): 1-12.
54. Hazaa,W, Shaltout, F.A., Mohamed El-Shate (2019). Prevalence of some chemical hazards in some meat products. *Benha Veterinary Medical Journal* 37 (2) 32-36.
55. Shaltout, F. A. E. (2024). Using of Meat Diets as a Functional Food, *Dietary Nourishment and Food Processing Techniques*, vol 1(3): 1-14
56. Shaltout, F. A. (2024). Evaluation of Hazards in food, *Journal of Medical Discoveries*, 1(1);1-8.
57. Hazaa,W, Shaltout, F.A., Mohamed El-Shater (2019). Identification of Some Biological Hazards in Some Meat Products. *Benha Veterinary Medical Journal* 37 (2) 27-31.
58. Shaltout, F. A. (2024). Through a light on Meat as Functional food, *International Journal of Nursing Didactics*, 14 (08): 1-12.

59. Gaafar,R. , Hassanin, F. S; Shaltout, F.A., Marionette Zaghloul (2019). Molecular detection of enterotoxigenic Staphylococcus aureus in some ready to eat meat-based sandwiches. *Benha Veterinary Medical Journal* 37 (2) 22-26.
60. Shaltout F. (2019). Microbial Contamination of Beef and Beef Products. *J. Nutrition and Food Processing*, 2(2): 1.
61. Gaafar,R. , Hassanin, F. S; Shaltout, F.A., Marionette Zaghloul (2019). Hygienic profile of some ready to eat meat product sandwiches sold in Benha city, Qalubiya Governorate, Egypt. *Benha Veterinary Medical Journal* 37 (2) 16-21.
62. Shaltout. F. A. (2024). Abattoir and Bovine Tuberculosis as a Reemerging Foodborne Disease. *Biomed J Sci & Tech Res* 54(3)-2024.
63. Saad S.M., Shaltout, F.A., Nahla A Abou Elroos, Saber B El-nahas(2019). Antimicrobial Effect of Some Essential Oils on Some Pathogenic Bacteria in Minced Meat. *J Food Sci Nutr Res*. 2 (1): 012-020.
64. Shaltout, F. A. E. (2024). Good News about Application of Advanced Methods in Food Examination, *Dietary Nourishment and Food Processing Techniques*, vol 1(3): 1-9.
65. Saad S.M., Shaltout, F.A., Nahla A Abou Elroos2 and Saber B El-nahas (2019). Incidence of Staphylococci and E. coli in Meat and Some Meat Products. *EC Nutrition* 14.6
66. Shaltout, F. A. E. (2024). Our options to improve food safety and quality by using preservatives which are used in food processing and preservation, *Dietary Nourishment and Food Processing Techniques*, vol 1(3): 1-16.
67. Saad S.M., Hassanin, F. S.; Shaltout, F.A., Marionette Z Nassif, Marwa Z Seif.(2019). Prevalence of Methicillin-Resistant Staphylococcus Aureus in Some Ready-to-Eat Meat Products. *American Journal of Biomedical Science & Research* 4(6):460-464.
68. Shaltout, Fahim (2019). Pollution of Chicken Meat and Its Products by Heavy Metals. Research and Reviews on Healthcare: *Open Access Journal*, 4, 3(381-3382).
69. Shaltout, F. A.; E.M EL-diahy; M. S. M Mohamed (2018): Effects of chitosan on quality attributes fresh meat slices stored at 4 C. *Benha Veterinary Medical Journal*, VOL. 35, NO. 2: 157-168.
70. Shaltout and Abdel-Aziz, (2004). Salmonella enterica serovar Enteritidis in poultry meat and their epidemiology. *Vet. Med. J. Giza*, 52 pp. 429-436.
71. Shaltout, F.A., Hala F El-Shorah, Dina I El Zahaby, Lamiaa M Lotfy (2018). Bacteriological Profile of Chicken Meat Products. *SciFed Food & Dairy Technology Journal*, 2:3.
72. Shaltout, F.A., Mohamed, A.H. El-Shater., Wafaa Mohamed Abd El-Aziz (2015). Bacteriological assessment of Street Vended Meat Products sandwiches in kalyobia Governorate. *Benha Veterinary Medical Journal*, 28(2):58-66,
73. Shaltout, F.A., Mohamed A El shatter and Heba M Fahim (2019). Studies on Antibiotic Residues in Beef and Effect of Cooking and Freezing on Antibiotic Residues Beef Samples. *Scholarly Journal of Food and Nutrition* 2(1) 1-4
74. Shaltout FA, Zakaria IM and Nabil ME. (2018). Incidence of Some Anaerobic Bacteria Isolated from Chicken Meat Products with Special Reference to Clostridium perfringens. *Nutrition and Food Toxicology* 2.5 (2018): 429-438.
75. Shaltout FA, Ahmed A A Maarouf and Mahmoud ES Elkhoully. (2017). Bacteriological Evaluation of Frozen Sausage. *Nutrition and Food Toxicology* 1.5; 174-185.
76. Shaltout FA, El-Toukhy EI and Abd El-Hai MM. (2019). Molecular Diagnosis of Salmonellae in Frozen Meat and Some Meat Products. *Nutrition and Food Technology Open Access* 5(1): 1-6.
77. Shaltout, F.A., A.M.Ali and S.M.Rashad (2016): Bacterial Contamination of Fast Foods. *Benha Journal of Applied Sciences (BJAS)* 1 (2)45-51.
78. Shaltout, F.A., Zakaria. I. M., Jehan Eltanani, Asmaa. Elmelegy (2015): Microbiological status of meat and chicken received to University student hostel. *Benha Veterinary Medical Journal*, 29(2):187-192, DECEMBER, 2015.
79. Saad,S.M. Edris, A.M.; Shaltout,F.A. and Edris, Shimaa (2012). Isolation and identification of salmonellae and E.coli from meat and poultry cuts by using A.multiplex PCR. *Benha Vet. Med.J.*special issue 16-26.
80. Saad, S.M. and Shaltout, F.A. (1998). Mycological Evaluation of camel carcasses at Kalyobia Abattoirs. *Vet.Med.J. Giza*,46(3):223-229.
81. Shaltout, F. A. (2024). Whey We Extend the Food Shelf Life by Aid of Natural Antioxidants? *Biomed J Sci & Tech Res* 59(1)-2024. BJSTR. MS.ID.009235
82. Saad S.M., Shaltout, F.A., Nahla A Abou Elroos, Saber B El-nahas. (2019). Antimicrobial Effect of Some Essential Oils on Some Pathogenic Bacteria in Minced Meat. *J Food Sci Nutr Res*. (1): 012-020.
83. Saad S.M., Hassanin, F. S; Shaltout, F.A., Marionette Z Nassif, Marwa Z Seif. (2019). Prevalence of Methicillin-Resistant Staphylococcus Aureus in Some Ready-to-Eat Meat Products. *American Journal of Biomedical Science & Research* 4(6):460-464.
84. Saad S.M., Shaltout, F.A., Nahla A Abou Elroos and Saber B El-nahas. (2019). Incidence of Staphylococci and E. coli in Meat and Some Meat Products. *EC Nutrition* 14.6.
85. Shaltout FA, Riad EM, TES Ahmed and AbouElhassan A. (2017). Studying the Effect of Gamma Irradiation on Bovine Offal's Infected with Mycobacterium tuberculosis Bovine Type. *Journal of Food Biotechnology Research* 1 (6): 1-5.
86. Shaltout FA, Zakaria IM and Nabil ME. (2018). Incidence of Some Anaerobic Bacteria Isolated from Chicken Meat Products with Special Reference to Clostridium perfringens. *Nutrition and Food Toxicology* 2.5 ;429-438.
87. Shaltout FA, Mohamed, A.Hassan and Hassanin, F. S (2004). Thermal Inactivation of Enterohaemorrhagic Escherichia Coli O157:H7 And Its Sensitivity To Nisin And Lactic Acid Cultures. 1st Ann. Confr., FVM., Moshtohor.
88. Shaltout FA, El-diahy, E.M.; Elmeslamy, M. and Elshaer, M. (2014). Study on fungal contamination of some chicken meat products with special reference to 2 the use of PCR for its identification. Conference, *Veterinary Medical Journal – Giza*.
89. shaltout, F.A. (2002). Microbiological Aspects of Semi-cooked chicken Meat Products. *Benha Veterinary Medical Journal* 13,2: 15-26.
90. Shaltout FA, Thabet, M.G2 and Hanan, A. Koura3. (2017). Impact of some essential oils on the quality aspect and shelf life of meat. *Benha Veterinary Medical Journal*, 33, (2): 351-364.

91. Shaltout FA, Mohammed Farouk; Hosam A.A. Ibrahim and Mostafa E.M. Afifi4. (2017): Incidence of Coliform and Staphylococcus aureus in ready to eat fast foods. *Benha Veterinary Medical Journal*, 32 1): 13 – 17.
92. Shaltout, F.A., Zakaria, I.M., Nabil, M.E. (2017). Detection and typing of *Clostridium perfringens* in some retail chicken meat products. *BENHA VETERINARY MEDICAL JOURNAL*. 33(2):283-291.
93. Shaltout, F.A. (1992). Studies on Mycotoxins in Meat and Meat by Products. M.V.Sc Thesis Faculty of Veterinary Medicine, Moshtohor, Zagazig University Benha branch.
94. Shaltout, F.A. (1996). Mycological And Mycotoxicological profile Of Some Meat products. Ph.D. Thesis, Faculty of Veterinary Medicine, Moshtohor, Zagazig University Benha branch.
95. Shaltout, F.A. (1998). Proteolytic Psychrotrophes in Some Meat products. *Alex. Vet. Med. J.* 14 (2):97-107.
96. Shaltout, F.A. (1999). Anaerobic Bacteria in Vacuum Packed Meat Products. *Benha Vet. Med.J.* 10 (1):1-10.
97. Shaltout, F.A. (2000). Protozoal Foodborne Pathogens in some Meat Products. *Assiut Vet. Med. J.* 42 (84):54-59.
98. Shaltout, F.A. (2001). Quality evaluation of sheep carcasses slaughtered at Kalyobia abattoirs. *Assiut Veterinary Medical Journal*, 46(91):150-159.
99. Shaltout, F.A. (2002). Microbiological Aspects of Semi-cooked Chicken Meat Products. *Benha Vet.Med.J.* 13(2):15-26.
100. Shaltout, F.A. (2003). *Yersinia Enterocolitica* in some meat products and fish marketed at Benha city. The Third international conference Mansoura 29-30.
101. Shaltout, F.A. (2009). Microbiological quality of chicken carcasses at modern Poultry plant. The 3rd Scientific Conference, Faculty of Vet. Med., Benha University, 1-3.
102. Shaltout, F.A. and Abdel Aziz ,A.M.(2004). *Salmonella enterica* Serovar Enteritidis in Poultry Meat and their Epidemiology. *Vet.Med.J.* ,Giza,52(3):429-436.
103. Shaltout, F.A. and Abdel Aziz, A.M. (2004). *Escherichia Coli* Strains in Slaughtered Animals and Their Public Health Importance. *J.Egypt. Vet. Med. Association* 64(2):7-21.
104. Shaltout, F.A., Amin, R., Marionet, Z., Nassif and Shimaa, Abdel-wahab (2014). Detection of aflatoxins in some meat products. *Benha veterinary medical journal*, 27(2) :368-374.
105. Shaltout, F.A. and Afify, Jehan Riad, EM and Abo Elhasan, Asmaa,A (2012). Improvement of microbiological status of oriental sausage. *Journal of Egyptian Veterinary Medical Association* 72(2):157-167.
106. Shaltout, F.A. and Daoud, J. R. (1996). Chemical analytical studies on rabbit meat and liver. *Benha Vet. Med.J.* 8 (2):17-27.
107. Shaltout, F.A. and Edris, A.M. (1999). Contamination of shawerma with pathogenic yeasts. *Assiut Veterinary Medical Journal*,40(64):34-39.
108. Shaltout, F. A.; Eldiasty, E. and Mohamed, M.S. (2014). Incidence of lipolytic and proteolytic fungi in some chicken meat products and their public health significance. *Animal Health Research Institute: First International Conference on Food Safety and Technology* 19-23 Cairo Egypt pages 79-89.
109. Shaltout, F.A.; Eldiasty, E.; Salem, R. and Hassan, Asmaa (2016). Mycological quality of chicken carcasses and extending shelf – life by using preservatives at refrigerated storage. *Veterinary Medical Journal -Giza (VMJG)*62(3)1-7.
110. Shaltout, F.A.; Salem, R. Eldiasty, E.; and Diab, Fatema. (2016). Mycological evaluation of some ready to eat meat products with special reference to molecular chacterization. *Veterinary Medical Journal -Giza* 62(3)9-14.
111. Shaltout, F. A.; Elshater, M. and Wafaa, Abdelaziz (2015). Bacteriological assessment of street vended meat products sandwiches in Kalyobia Governorate. *Benha Vet. Med.J.* 28 (2):58-66.
112. Shaltout, F. A.; Gerges, M.T. and Shewail, A.A. (2018). Impact of Organic Acids and Their Salts on Microbial Quality and Shelf Life of Beef. *Assiut veterinary medical journal* 64(159): 164-177
113. Shaltout, F.A.; Ghoneim, A.M.; Essmail, M.E. and Yousseif, A. (2001). Studies on aflatoxin B1 residues in rabbits and their pathological effects. *J.Egypt. Vet. Med. Association* 61(2):85-103.
114. Shaltout, F.A. and Hanan, M.T. El-Lawendy (2003). Heavy Metal Residues In Shawerma. *Beni-Suef Vet.Med.J.* 13(1):213-224.
115. Shaltout, F.A. and Hashim, M.F. (2002). Histamine in salted, Smoked and Canned Fish products. *Benha Vet. Med.J.* 13 (1):1-11.
116. Shaltout, F.A.; Hashim, M.F. and Elnahas, s. (2015). Levels of some heavy metals in fish (*tilapia nilotica* and *Claris lazera*) at Menufia Governorate. *Benha Vet. Med.J.* 29 (1):56-64.
117. Shaltout, F.A. and Ibrahim, H.M. (1997). Quality evaluation of luncheon and Alexandrian sausage. *Benha Vet. Med.J.* 10 (1):1-10.
118. Shaltout, F.A.; Nassif, M and Shakran, A (2014). Quality of battered and breaded chicken meat products. *Global Journal of Agriculture and Food Safety Science* – 1(2).
119. Shaltout, F.A., Amani M. Salem, A. H. Mahmoud, K. A (2013). Bacterial aspect of cooked meat and offal at street vendors level. *Benha veterinary medical journal*, 24(1): 320-328.
120. Shaltout,F.A. and Salem, R.M.(2000). Moulds, aflatoxin B1 and Ochratoxin A in Frozen Livers and meat products. *Vet . Med. J.Giza* 48(3):341-346.
121. Yasser H. Al-Tarazi, A. Al-Zamil, Shaltout FA. and H. Abdel-Samei (2002). Microbiological status of raw cow milk marketed in northern Jordan. *AVMJ Volume 49 Issue 96 Pages* 180-194
122. Shaltout FA, Zakaria IM and Nabil ME. (2018). Incidence of Some Anaerobic Bacteria Isolated from Chicken Meat Products with Special Reference to *Clostridium perfringens*. *Nutrition and Food Toxicology* 2(5):429-438.
123. Shaltout, F. A.; El-diasty, E.M. and Mohamed, M.S. (2014). Incidence of lipolytic and proteolytic fungi in some chicken meat products and their public health significance. 1st Scientific conference of food safety and Technology .2014, pp. 79-89.
124. Shaltout, F.A.; El-diasty, E.M.; Salem, R. M. and Asmaa, M. A. Hassan. (2016). Mycological quality of chicken carcasses and extending shelf -life by using preservatives at refrigerated storage. *Veterinary Medical Journal – Giza* ,62(3) :1-10.
125. Shaltout FA, R.M. Salem, E.M. El-Diasty and W.I.M. Hassan. (2019). Effect of Lemon Fruits and Turmeric Extracts on Fungal Pathogens in Refrigerated Chicken Fillet Meat. *Global Veterinaria* 21 (3): 156-160,

126. Shaltout FA, El-diasty, E.M; Elmesalamy, M. and Elshaer, M. (2014). Study on fungal contamination of some chicken meat products with special reference to 2 the use of PCR for its identification. Conference, *Veterinary Medical Journal – Giza*.
127. Shaltout, F. A.; Salem, R. M; El-diasty, Eman and Fatema, A.H. Diab. (2016). Mycological evaluation of some ready to eat meat products with special reference to molecular characterization. *Veterinary Medical Journal – Giza*. 62(3): 9-14.
128. Shaltout FA, Ahmed, A.A. Maarouf, Eman, M.K. Ahmed (2018). Heavy Metal Residues in chicken cuts up and processed chicken meat products. *BENHA VETERINARY MEDICAL JOURNAL*, 34(1): 473-483.
129. Shaltout,F.A.; Hanan M. Lamada , Ehsan A.M. Edris.(2020): Bacteriological examination of some ready to eat meat and chicken meals. *Biomed J Sci & Tech Res.*, 27(1): 20461-20465.
130. Sobhy, Asmaa and Shaltout, Fahim (2020). Prevalence of some food poisoning bacteria in semi cooked chicken meat products at Qaliubiya governorate by recent Vitek 2 compact and PCR techniques. *Benha Veterinary Medical Journal* 38 (2020) 88-92.
131. Shaltout, F. A. (2024). Good Idea on Preservatives and the Natural Preservatives and Meat Preservation Against the Foodborne Pathogens and the Spoilage Microorganisms. *Biomed J Sci & Tech Res* 57(5)-2024. BJSTR. MS.ID.009067.
132. Sobhy, Asmaa and Shaltout, Fahim (2020). Detection of food poisoning bacteria in some semi-cooked chicken meat products marketed at Qaliubiya governorate. *Benha Veterinary Medical Journal* 38 (2020) 93-96.
133. Shaltout, F.A. (2024). Abattoir And Bovine Tuberculosis as A Reemerging Foodborne Disease. *Clinical Medical Reviews and Report* 6(1):1-7.
134. Shaltout, F.A. (2023). Viruses in Beef, Mutton, Chevron, Venison, Fish and Poultry Meat Products. *Food Science & Nutrition Technology* 8(4):1-10.
135. Shaltout, F. A. (2024): Human Salmonellosis Acquired through the Food". *Acta Scientific Pharmaceutical Sciences* 8(3). 1-6: 12-17
136. Elkholly, R. A; Hussein, M. N; Abou El-Roos, N. A. et al. (2025). Enhancing Microbiological and Histological Quality of Frozen Turkey Meat Using Vinegar. *Egyptian Journal of Veterinary Science* 1-8.
137. Shaltout, F. A. (2024). Availability, Price, Tradition, Religion, Income, Social, Development and Economic Influences on Meat Consumption. *Med J Clin Trials Case Stud* 2024, 8(2): 000370
138. Mohamed Q. M., Fahim A. Shaltout, f.A. and Ali, E.A. (2025). Multidrug-Resistant Bacteria from Raw Chevron and Mutton Meat. *Egyptian Journal of Veterinary Sciences* pp 1-8.
139. Shaltout, F. A. E; Ab delazez Ahmed Helmy Barr, Mohamed Elsayed Abdelaziz. (2024). Pathogenic Micro organisms in Meat Products. *Biomed J Sci & Tech Res* 41(4)-2022. BJSTR. MS.ID.006623.
140. Mohamed Q. M., Fahim A. Shaltout, f.A. and Ali, E.A. (2025). Bacteriological Quality Profiles and Prevalence of Staphylococcus aureus, Salmonella Species, and E. coli in Meat Samples of Sheep and Goats. *Egyptian Journal of Veterinary Sciences* pp 1-7.
141. Ibrahim, S. M.; Hassanin, F. S.; Abou-Elroos, N. S. and Shaltout, F.A (2025). Quantifying The antimicrobial Efficacy of Selected Herbal Essential Oils Against Bacteria in Simulated Beef Steak Conditions. *Egyptian Journal of Veterinary Sciences*, pp 1-9.
142. Shaltout, F. A. (2024). The Availability, the Price, the Tradition, the Religion, the Income, the Social, the Development and the Economic Influences on the Meat Consumption. *Biomed J Sci & Tech Res* 55(4)-2024. BJSTR. MS.ID.008734.
143. Ibrahim, S. M.; Hassanin, F. S.; Abou-Elroos, N. S. and Shaltout, F.A (2025). Evaluating The impact of Certain Herbal Essential Oils on The Shelf Life and Chemical Composition of Beef Steak. *Egyptian Journal of Veterinary Sciences*, pp. 1-8.
144. Shaltout, F. A. (2024). Our Opinion on Using of Irradiation in Food Preservation and Production. *Journal of Medical and Clinical Case Reports*, 1(6): 1-9.
145. Anees, K. P; El-diasty, E. M. and Shaltout, F. A. (2023). Mycological Evaluation and Occurrence of Aflatoxins and Ochratoxin A in Tilapia Oreochromis niloticus Fish and Fish Products. *Journal of Advanced Veterinary Research* ,13(7):1381-1385.
146. Amr, a. K; hassanin, f. S.; hassan, m. A. And shaltout, f. A. E. (2024): trials to estimate and control the residual levels of heterocyclic aromatic amines in meat products. *Assiut Vet. Med. J.*, 70 (182): 98-105.
147. Shaltout, F. A.; Mohammed, I.; Afify, E. A. (2020). Detection of E. coli O157 and Salmonella species in some raw chicken meat cuts in Ismailia province, Egypt. *Benha Veterinary Medical Journal* 39(2): 101-104.
148. Hassanin, F. S.; Shaltout, F. A.; Maarouf, A. A.; El-Sisy, S. F.; Ahmed, A. E. (2020). Bacteriological profile of frozen chicken meat cuts at Qalubiya governorate markets. *Benha Veterinary Medical Journal* 39 (2) 1-5.
149. Shaltout, F. A.; Heikal, G. I.; Ghanem, A. M. (2022). Mycological quality of some chicken meat cuts in Gharbiya governorate with special reference to Aspergillus flavus virulent factors. *Benha Veterinary Medical Journal* 40 (42) 12-16.
150. Shaltout, F. (2024). Application of Irradiation in Food Preservation and Production. *Journal of Pathology Research Reviews & Reports*. SRC/JPR-190. 6(5): 1-8.
151. Taha, S. T.; Shaltout, F. A.; Shimaa, N. Edris, S. N.; Mohamed, E. Nabil, M. E. (2024). Effect of lavender oil, clove oil and frankincense extract on sensory and microbial properties of raw drumsticks in refrigerator. *Benha Veterinary Medical Journal* 46 (1) 135-139.
152. Shaltout, F. A.; Salem, R. M; Eldiasty, E. M and Diab, F. A. (2023). Experimental Study on the Effect of Propionibacterium and Acetic acid on Candida albicans contamination in chicken fillet Stored at Chilling Conditions. *Benha Veterinary Medical Journal* 43 (2) 91-96.
153. Mubarak, S. R.; Abou EL-Roos, N. A.; Hussein, M. N. and Shaltout, F. A. E. (2024). Comparative microbiological evaluation between fresh and frozen bovine liver. *Benha Veterinary Medical Journal* 47 (1) 99-102.
154. El Asely, M.M.; Fath Elbab, G. F.; Shaltout, F. A. E. (2024). Antibiotic Residues in Commercially Available Freshwater and Marine Fish: A Risk Assessment. *Egyptian Journal of Aquatic Biology & Fisheries*, 28(1): 397 – 410.
155. El Asely, M. M.; Fath Elbab, G. F. and Shaltout, A. E. (2025). Impact of Freezing Intervals on Oxytetracycline and

- Ciprofloxacin Residues in Nile Tilapia and Catfish Muscles. *Egypt. J. Vet. Sci.* Vol. 56, No. 7, pp. 1419-1424.
156. Elkholy, R. A.; Abou EL-Roos, N. A.; Hussein, M. N. and Shaltout, F. A. E. (2025). Differential Microbiological Quality on Marketed Frozen Turkey Breast and Thigh Meat. *Egypt. J. Vet. Sci.* 56(1), pp. 1-10.
 157. Shaltout, F. A. (2024). The Food Additives Used In Food Production, Advantages and Disadvantages. *World Journal of Internal Medicine and Surgery* 1(6): 1-17
 158. Shaltout, F. A. (2024). Right Methods to Extend the Meat Shelf-Life by Using of Natural Preservatives and Their Public Health Importance. *Journal of Medicine Care and Health Review* 1(2): 1-17.
 159. Saad M. Saad, Fahim A. Shaltout, Amal A. A. Farag & Hashim F. Mohammed (2022). Organophosphorus Residues in Fish in Rural Areas. *Journal of Progress in Engineering and Physical Science* 1(1): 27-31.
 160. Shaltout, F. A. (2024). Importance of Extending the Shelf Life of the Meat. *Journal of Medical and Clinical Case Reports* 01(9): 1-10.
 161. Shaltout, F. A. E., Mona N. Hussein, Nada Kh. Elsayed (2023). Histological Detection of Unauthorized Herbal and Animal Contents in Some Meat Products. *Journal of Advanced Veterinary Research* 13(2): 157-160.
 162. Shaltout, F. A. (2023). Abattoir and Bovine Tuberculosis as A Reemerging Foodborne Disease. *Clinical Medical Reviews and Reports* 6(1): 1-7.
 163. Shaltout, F. A., Ramadan M. Salem, Eman M. Eldiasty, Fatma A. Diab (2022). Seasonal Impact on the Prevalence of Yeast Contamination of Chicken Meat Products and Edible Giblets. *Journal of Advanced Veterinary Research* ,12(5):641-644.
 164. Shaltout, S. and Shaltout, F. (2024), "Food Borne Bacterial Diseases Due to Consumption of Meat, Fish and Poultry Products", *Arch Health Sci*; 8(1): 1-8.
 165. Shaltout, F. A. (2024). Our Opinion on Using of Irradiation in Food Preservation and Production. *Journal of Medical and Clinical Case Reports* 01 (6): 1-9.
 166. Hakeem, K. P.; El-diastry, E. M.; Shaltout, F. A. E. (2023). Effects of natural compounds of some plants on microbial contamination and sensory quality of fish fillet during refrigeration. *Benha Veterinary Medical Journal* 45 (1) 152-156.



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DOI:10.31579/2690-8794/260

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