

Study on Preparation and Shelf life of Chicken Tinola on the Go

Jenny Ann P. Abisado¹, Elle Jane M. Estrellon², Lilibeth A. Geronimo³, Andrea R. Mier⁴, Xyryn Paige A. Ramos⁵, Jaimee M. Saladino⁶

^{1,2,3,4,5,6}Student, Department of Technical Vocational Teacher Education, College of Education, Isabela State University, Ilagan City, Isabela Philippines 3300

ABSTRACT: The study focused on the Sensorial evaluation and shelf-life of Chicken Tinola on the go as alternative to instant cup noodles. This product aims to make an instant Chicken Tinola available anytime and anywhere. To further appreciate the general acceptability of Chicken Tinola on the go in terms of aroma, appearance, texture and taste, a sensory evaluation was done by the 50 respondents from different respondents across groups. Where include children and lactating mother, students (boarders), travelers and food experts. Means and Standard Deviation were used to describe the data gathered. As the level of acceptability, in terms of appearance the chicken tinola on the go was rated very positively, with a mean score of 4.33, the aroma is also rated very positively, with a category mean score of 4.35 that received high satisfaction score, while the taste was received mean score of 4.29 and lastly for texture was rated highly as well, with mean score of 4.25 which the evaluation shows a high level of satisfaction across various sensory attributes among different groups. The appearance and aroma received the highest satisfaction scores, particularly from lactating mother and students-boarders, taste and texture were also well-received, although travelers and food experts rated them slightly lower compared to other groups. The results indicate that the Chicken Tinola on the go product is generally very acceptable across different groups of respondents. The sensorial evaluation shows that there is a significant difference in the aroma among the respondents, but no significant difference in their evaluation of appearance, taste and texture. Overall, the acceptability of the Chicken Tinola on the go was found to be very high across all evaluated sensory attributes, with mean scores consistently in the range indicating very satisfied responses. This suggests that the incorporation of the Chicken Tinola on the go is well-received in terms of aroma, appearance, texture and taste.

KEYWORD: Chicken Tinola, packaging, Sensorial Evaluation, Shelf-life

INTRODUCTION

Chicken Tinola is a beloved Filipino dish, known for its comforting and flavorful broth made with chicken, green papaya, moringa leaves, and chili leaves. Chicken Tinola is indeed a popular and beloved Filipino dish. In every Filipino household, it is a one dish variance commonly served for lunch or dinner with rice of course Filipino soup that is very healthy and flavorful. According to Barnachea (2018), Chicken Tinola is a traditional Filipino soup with a unique flavor profile, typically made with chicken, ginger, and onions, and often complemented with green papaya and chili pepper leaves. The dish is a staple in many Filipino households but has limited availability in urban areas due to the challenges associated with its preparation and storage.

Despite its popularity, especially in rural areas, Chicken Tinola is not widely available in urban settings due to its perishable nature and the time-consuming preparation process. The development of a convenient, ready-to-cook version of this dish could address these challenges, making it easier for people to enjoy Chicken Tinola anytime, anywhere.

This research aims to address these issues by creating new food product that is convenient and healthier food. One of the pillars for Sustainable Development Goals set by the United Nation is the SDG 2 which is achieving zero hunger around the world, providing a readily available and nutritious food with unique flavor that can be enhance through innovative processing techniques. Through integrating Chicken Tinola into a convenient awareness and instant food, enhance nutritional awareness by promoting the consumption of nutritious and convenient food. Drive economic development by introducing new food product, creating employment opportunities and fostering economic growth in the food preservation and manufacturing sectors.

This research project has substantial potential to contribute a sustainable development by addressing key SDG's, by developing Chicken Tinola as a convenient food that create a beneficial scenario for consumer and entrepreneur. The development of nutrition and convenient food product will not only meet consumer demands but also promote healthy, eating habit and endorse to a economic growth as prescribe in SDG 8.

Chicken Tinola is one of the most popular dish for chicken, it is known because of its unique taste, and aroma. Commonly serve in the rural areas, but are seldom found in the urban areas because of being expensive. Some Filipinos always

Study on Preparation and Shelf life of Chicken Tinola on the Go

reminisce the taste of Chicken tinola anytime, anywhere but it could not be stored longer because it is easily spoiled and consume a lot of time in preparing and cooking this dish and because of the busy life of the people in study, works and limitation on knowledge in preparing this dish. Therefore, one of the solutions to make the Chicken Tinola be available, anytime and anywhere is through the processing of instant food or make another way of preparation for this dish like dehydrating the chicken meats and other ingredients to prolong the shelf-life of the dish. The study's findings could lead to the development of the first-ever ready-to-cook Chicken Tinola dish, making it accessible to a wider audience and providing a solution for those who wish to enjoy this traditional dish conveniently.

METHODS

This study is limited to the preparation, level of acceptability and shelf-life of the developed Chicken Tinola on the go. The product has undergone sensory evaluation in terms of aroma, appearance, taste and texture.

There were Fifty (50) respondents composed of (10) children and (10) Lactating mother from Naguillian Norte City of Ilagan, Isabela, (10) travelers at Alibagu Terminal, (10) Food experts from Isabela State University-Ilagan Campus and TESDA - Ilagan, Isabela School of Arts and Trades, and (10) students/boarders from ISU – Ilagan Campus.

The study employed sensorial evaluation using paper-pencil questionnaire to determine the acceptability of Chicken Tinola on the go.

Table 4. 5-Point Likert Scale

Numerical Scale	Range	Descriptive
5	4.20 - 5.00	Very Satisfied
4	3.20 - 4.19	Satisfied
3	2.40 - 3.19	Neutral
2	0.80 - 2.39	Slightly Dissatisfied
1	1.00 - 0.79	Dissatisfied

Product Development

A. Preparation of Chicken meat

Table 1. Preparation of Raw Chicken meat

Raw Material	Yield
1 1/2 kilogram of chicken	20 pieces

The process of preparing "Chicken Tinola on the Go" begins with selecting of live chicken. The chicken is then slaughtered, bled, and scalded in hot water to facilitate feather removal. After defeathering, the chicken is thoroughly washed before undergoing evisceration to remove internal organs. To remove excess blood, the chicken is cut into small pieces, and washed again.

B. Preparation of Chicken Tinola

Table 2. List of Ingredients and Measurement of Chicken Tinola on the Go

Ingredients	Measurement	Yield
Chicken	390 grams	Approximately: grams of chicken Serving size: 40 grams of chicken tinola on the go per person
Water	681 grams	
Garlic	125 grams	
Onion	112 grams	
Ginger	8 grams	
Pepper	3 grams	
Oil	28 grams	
Salt	90 grams	

Measure all the ingredients based on the standard proportion of ingredients as stated in the table above. Peel and slice the onion, garlic, and ginger. Heat a large pot over medium heat. Add oil and sauté the onion, garlic, and ginger until they become fragrant and translucent or about 5 minutes. Add the chicken meat to the pot and cook until they turn slightly brown on all sides. Season with salt and black pepper. Add water to the pot, ensuring the chicken meat is fully submerged. Bring to a boil, then reduce the heat to low and let it simmer for 1 hour. Remove the pot from heat and allow it to cool slightly. Take out the chicken meat and set aside. Strain the soup to remove any solids. Once the chicken meat has cooled, shred the meat and set it aside. Discard the bones and skin.

Study on Preparation and Shelf life of Chicken Tinola on the Go

Drain the shredded chicken for at least 3 hours to remove excess moisture. Lastly, put the chicken meat in the cabinet dryer, dehydrate the chicken meat for at least 7 hours until the chicken meats are totally dried. Put in a container, sealed and labeled.

C. Preparation of Chicken Cubes from Chicken Tinola Soup

Table 3. List of Ingredients and Measurement of Chicken Cubes

Ingredients	Measurement	Yield
Chicken Broth	100 grams	Approximately: grams of chicken Broth Serving size: 20 grams of chicken Broth on the go per person
Carrot	130 grams	
Parsley	21 grams	
Salt	90 grams	
Powder Onion	4.73 grams	
Powder Garlic	4.73 grams	
Powder Ginger	4.73 grams	
Cornstarch	33 grams	
black pepper	6.90 grams	

In a clean pot, add the strained Chicken Tinola soup, add chopped carrot, parsley, salt, black pepper, and powdered seasoning. Bring the mixture to a boil, then reduce the heat and simmer for 5 minutes. Allow the mixture to cool slightly. Transfer to a blender and blend until smooth, creating a fine paste. Pour the blended paste back into the pot. In a small bowl, dilute cornstarch and one tablespoons of water. Add the corn starch to the pot and cook over medium heat, stirring constantly, until the mixture thickens, for about 2-3 minutes. Remove from heat and let it cool completely. Pour the mixture into ice cube trays. Freeze for at least 3 hours, or until solid. Once the cubes are fully frozen, remove from the trays. Wrap each cube in parchment paper and then in aluminum foil. Pack and label.

D. Preparation of Vegetables

Table 4. Ingredients and Measurement of Vegetables Mix in the Chicken Tinola on the Go

Ingredients	Measurement	Yield
Chili leaves	69 grams	Serving size: 15 grams
Moringa leaves	69 grams	Serving size: 15 grams

First wash the chili leaves and moringa leaves. Next put vegetables on dehydration machine. Dehydrate the chili leaves for 5 minutes and 10 minutes for the moringa leaves. Set aside and let it cool. Measure it on standard proportion, pack and label the finish product.

Table 5. Level of Acceptability of the Developed Chicken Tinola on the Go in terms of Appearance

	Mean	SD	Description
Appearance			
1. The chicken tinola on the go has a brightly yellow color.	4.52	0.65	Very Satisfied
2. Each ingredients has delicate appearance that enhances its visual appeal.	4.22	0.58	Very Satisfied
3. The food is eye-catching and or visually appealing.	4.24	0.72	Very Satisfied
Category Mean	4.33	0.48	Very Satisfied

In terms of appearance, the Chicken Tinola on the go received a mean score of 4.52 with a standard deviation (SD) of 0.65, indicating that respondents were very satisfied with its brightly yellow color. The delicate appearance of each ingredient, enhancing the dish's visual appeal, had a mean score of 4.22 with an SD of 0.58, also reflecting a high level of satisfaction. The overall visual appeal of the food was found to be eye-catching, with a mean score of 4.24 and an SD of 0.72, again showing very satisfied responses. Overall, the category mean for appearance was 4.33 with an SD of 0.48, suggesting that respondents were very satisfied with the appearance of the chicken tinola on the go.

Study on Preparation and Shelf life of Chicken Tinola on the Go

Table 6. Level of Acceptability of the Developed Chicken Tinola on the Go in terms of Aroma

Aroma			
1. The soup has deep flavour of the chicken, vegetables and the fragrance of the ginger.	4.38	0.72	Very Satisfied
2. The aroma of vegetables and chicken is very distinctive.	4.38	0.63	Very Satisfied
3. There is a unique and flavorful aroma that is pleasant and appetizing.	4.30	0.68	Very Satisfied
Category Mean	4.35	0.54	Very Satisfied

Regarding aroma, the deep flavor of the chicken, vegetables, and the fragrance of the ginger received a mean score of 4.38 with an SD of 0.72, showing a high level of satisfaction. The distinctive aroma of the vegetables and chicken also had a mean score of 4.38, but with an SD of 0.63, reflecting very satisfied responses. The unique and flavorful aroma, which is pleasant and appetizing, garnered a mean score of 4.30 with an SD of 0.68. The category mean for aroma was 4.35 with an SD of 0.54, indicating overall very satisfied responses from the participants.

Table 7. Level of Acceptability of the Developed Chicken Tinola on the Go in terms of Taste

Taste			
1. The soup has a balance flavour of the chicken and is delicious.	4.28	0.76	Very Satisfied
2. The vegetables and chicken meat are full of flavor	4.32	0.82	Very Satisfied
3. The overall taste is well-blended and similar taste to cook Chicken Tinola.	4.26	0.80	Very Satisfied
Category Mean	4.29	0.65	Very Satisfied

For taste, the balanced flavor of the chicken and its deliciousness received a mean score of 4.28 with an SD of 0.76. The full flavor of the vegetables and chicken meat had a mean score of 4.32 with an SD of 0.82, showing very satisfied responses. The well-blended overall taste, similar to cooked Chicken Tinola, was rated with a mean score of 4.26 and an SD of 0.80. The category mean for taste was 4.29 with an SD of 0.65, indicating that respondents were very satisfied with the taste of the product.

Table 8. Level of Acceptability of the Developed Chicken Tinola on the Go in terms texture

Texture			
1. The chicken meat is not too softly but rather firm and slightly chewy.	4.18	0.85	Satisfied
2. The chicken meat is moist but not too hard, and the veggies are cooked well and well-combined.	4.24	0.74	Very Satisfied
3. There is a balanced texture of the vegetables and chicken meat.	4.32	0.82	Very Satisfied
Category Mean	4.25	0.71	Very Satisfied

In terms of texture, the firmness and slight chewiness of the chicken meat received a mean score of 4.18 with an SD of 0.85, indicating satisfied responses. The moistness of the chicken meat, which is not too hard, and the well-cooked vegetables had a mean score of 4.24 with an SD of 0.74, showing very satisfied responses. The balanced texture of the vegetables and chicken meat was rated with a mean score of 4.32 and an SD of 0.82. The category mean for texture was 4.25 with an SD of 0.71, suggesting that respondents were very satisfied with the texture of the chicken tinola on the go.

According to Cabarles (2008) on the conducted study to determine which of the natural food preservatives could lengthen the shelf life and acceptability of instant "ginataang manok" the appearance, color, odor, flavor, texture, and over-all acceptability of processed products with different natural preservatives were liked moderately by the majority of the taste panelists.

In summary, the overall acceptability of the Chicken Tinola on the go was found to be very high across all evaluated sensory attributes, with mean scores consistently in the range indicating very satisfied responses. This suggests that the incorporation of Chicken Tinola on the go is well-received in terms of appearance, aroma, taste, and texture.

Study on Preparation and Shelf life of Chicken Tinola on the Go

Table 9. Level of Acceptability of Chicken Tinola on the Go in Terms of Appearance as Evaluated by the Grouped of Respondents

Criteria	Groups	Mean	SD	Description
Appearance	Children	4.40	0.38	Very Satisfied
	Lactating Mother	4.50	0.57	Very Satisfied
	Student-Boarders	4.47	0.28	Very Satisfied
	Travelers	4.03	0.43	Satisfied
	Food Experts	4.23	0.59	Very Satisfied

The table shows the general acceptability of Chicken Tinola on the go in terms of appearance.

For appearance, children rated the product with a mean score of 4.40 and a standard deviation (SD) of 0.38, indicating they were very satisfied. Lactating mothers rated it even higher, with a mean score of 4.50 and an SD of 0.57, also showing very high satisfaction. Student-boarders gave a mean score of 4.47 and an SD of 0.28, reflecting very satisfied responses. Travelers, however, rated it slightly lower, with a mean score of 4.03 and an SD of 0.43, showing they were satisfied. Food experts gave a mean score of 4.23 and an SD of 0.59, indicating they were very satisfied overall.

Table 10. Level of Acceptability of Chicken Tinola on the Go in Terms of Aroma as Evaluated by the Grouped of Respondents

Aroma	Children	4.07	0.44	Satisfied
	Lactating Mother	4.63	0.55	Very Satisfied
	Student-Boarders	4.60	0.38	Very Satisfied
	Travelers	4.10	0.42	Satisfied
	Food Experts	4.37	0.66	Very Satisfied

Regarding aroma, children provided a mean score of 4.07 and an SD of 0.44, indicating they were satisfied. Lactating mothers rated the aroma highly, with a mean score of 4.63 and an SD of 0.55, showing they were very satisfied. Student-boarders also rated the aroma highly, with a mean score of 4.60 and an SD of 0.38, indicating very satisfied responses. Travelers gave a mean score of 4.10 and an SD of 0.42, showing they were satisfied. Food experts provided a mean score of 4.37 and an SD of 0.66, indicating they were very satisfied with the aroma.

Table 11. Level of Acceptability of Chicken Tinola on the Go in Terms of Taste as Evaluated by the Grouped of Respondents

Taste	Children	4.23	0.74	Very Satisfied
	Lactating Mother	4.47	0.72	Very Satisfied
	Student-Boarders	4.47	0.55	Very Satisfied
	Travelers	4.10	0.57	Satisfied
	Food Experts	4.17	0.72	Satisfied

In terms of taste, children rated it with a mean score of 4.23 and an SD of 0.74, showing they were very satisfied. Lactating mothers gave a mean score of 4.47 and an SD of 0.72, reflecting very high satisfaction. Student-boarders also provided a mean score of 4.47 and an SD of 0.55, indicating they were very satisfied. Travelers rated it slightly lower, with a mean score of 4.10 and an SD of 0.57, indicating they were satisfied. Food experts gave a mean score of 4.17 and an SD of 0.72, showing they were satisfied with the taste.

Study on Preparation and Shelf life of Chicken Tinola on the Go

Table 12. Level of Acceptability of Chicken Tinola on the Go in Terms of Texture as Evaluated by the Grouped of Respondents

Texture	Children	4.20	0.71	Satisfied
	Lactating Mother	4.47	0.74	Very Satisfied
	Student-Boarders	4.37	0.74	Very Satisfied
	Travelers	4.10	0.80	Satisfied
	Food Experts	4.10	0.63	Satisfied

For texture, children gave a mean score of 4.20 and an SD of 0.71, indicating they were satisfied. Lactating mothers rated the texture highly, with a mean score of 4.47 and an SD of 0.74, showing they were very satisfied. Student-boarders provided a mean score of 4.37 and an SD of 0.74, indicating very satisfied responses. Travelers gave a mean score of 4.10 and an SD of 0.80, showing they were satisfied. Food experts rated the texture with a mean score of 4.10 and an SD of 0.63, indicating they were satisfied.

Based on the data the Chicken Tinola on the go received high satisfaction ratings for its bright yellow color, delicate ingredients, and eye-catching visual appeal. The deep flavor of chicken, vegetables, and ginger aroma was highly appreciated, with a balanced and delicious taste. The texture was firm and slightly chewy, with scores of 4.18 for chicken meat and 4.24 for vegetables. Overall, the Chicken Tinola on the go was well-received in terms of appearance, aroma, taste, and texture.

The study similar to polyanskikh et al. (2020) titled, "The Technology of Dehydrated Soup Base from Poultry Meat and Bone Residue" The total composition of essential amino acids remained unchanged, but the total amino acid content increased due to an increase in protein mass fraction and decreased moisture. The results showed that the broths were transparent with slight turbidity, light yellow, liquid, with a moderate smell and taste. The overall rating was 4.8-4.9. This shown that it is also highly accepted which is similar on the data of the level of acceptability of Chicken Tinola on the go in terms of appearance, aroma, taste and texture.

Overall, the evaluation results show a high level of satisfaction across various sensory attributes among different groups. Appearance and aroma received the highest satisfaction scores, particularly from lactating mothers and student-boarders. Taste and texture were also well-received, although travelers and food experts rated them slightly lower compared to other groups. The results indicate that the Chicken Tinola on the go product is generally very acceptable across different demographics.

Table 13. Differences on the Evaluation of Children, Lactating Mother, Student (boarders), Travelers, and Food Expert on the Preparation of Chicken tinola on the Go

Criteria	F-value	p-value	Comparison	Decision	Remark
Appearance	1.73	0.16	p-value > 0.05	accept Ho	no significant difference
Aroma	2.86	0.03	p-value < 0.05	reject Ho	difference is significant
Taste	0.66	0.62	p-value > 0.05	accept Ho	no significant difference
Texture	0.51	0.73	p-value > 0.05	accept Ho	no significant difference

The table presents the differences among the evaluations of children, lactating mother, student(boarders), travelers and food expert.

For appearance, the F-value is 1.73 with a p-value of 0.16. Since the p-value is greater than 0.05, the null hypothesis (Ho) is accepted, indicating that there is no significant difference in the evaluation of appearance among the different groups.

For aroma, the F-value is 2.86 with a p-value of 0.03. Since the p-value is less than 0.05, the null hypothesis (Ho) is rejected, indicating that there is a significant difference in the evaluation of aroma among the different groups.

For taste, the F-value is 0.66 with a p-value of 0.62. Since the p-value is greater than 0.05, the null hypothesis (Ho) is accepted, indicating that there is no significant difference in the evaluation of taste among the different groups.

For texture, the F-value is 0.51 with a p-value of 0.73. Since the p-value is greater than 0.05, the null hypothesis (Ho) is accepted, indicating that there is no significant difference in the evaluation of texture among the different groups.

The data reveals differences in evaluations among different groups, including children, lactating mothers, students, travelers, and food experts. The F-value for appearance is 1.73, rejecting the null hypothesis (Ho). Aroma has a F-value of 2.86, showing a significant difference in evaluation. Taste has a F-value of 0.66, accepting the null hypothesis (Ho). Texture has a F-value of 0.51,

Study on Preparation and Shelf life of Chicken Tinola on the Go

rejecting the null hypothesis (Ho). In summary, there is a significant difference in aroma evaluations among children, lactating mothers, students, travelers, and food experts, but no significant difference in appearance, taste, or texture evaluations.

Based on the Study of Saranya et al. (2010) titled, "Development and quality evaluation of enriched moringa (*moringa oleifera*) based soup mixes (EMS)" that aimed to develop nutrient-packed food supplements from locally available moringa. The study used two processing techniques (drying-blending and pulping-dehydration) to make moringa soup mixes more convenient and promote its consumption. After three months of storage, the sensory attributes of the moringa enriched soup mixes remained stable, with no significant variations in terms of appearance, color, flavor, texture, or taste.

In summary, the evaluation shows that there is a significant difference in the aroma among children, lactating mother, student(boarders), travelers and food experts, but no significant difference in their evaluations of appearance, taste, and texture.

CONCLUSION AND FUTURE WORKS

Based on the findings the popular dish of Chicken Tinola as Tinola on the Go, offering it anytime and anywhere. This innovative method uses instant food processing or dehydrating chicken meat and ingredients to make it available to the public. The product will enhance nutritional awareness, promote good health, and drive economic development by creating employment opportunities in food preservation and manufacturing sectors. The unique taste and processing methods will cater to a broad consumer base, promoting healthy eating habits and economic growth. Sensory evaluations conducted on 50 respondents revealed high acceptability across all sensory attributes, indicating its well-received incorporation in terms of appearance, aroma, taste, and texture.

Recommendations

In the light of the foregoing findings and conclusions, the researcher recommends the following:

1. Homemakers, or anyone else interested in these products are encouraged to explore the chicken as Chicken Tinola on the go.
2. Future researchers and researchers are encouraged to go to DOST to examine the nutritional content.
3. Explore other equipment in dryer a product and methods to extend the shelf life of Chicken Tinola on the Go. This could include adjustment to preservation process, packaging improvements or storage recommendations to consumers.

Ethical Considerations

The research was conducted with consideration for all parties involved, including participants and interested parties. The research methodology influenced the measures taken, adhering to the university's policies and guidelines, ensuring effective performance of researchers and ensuring the well-being of all involved panelist.

REFERENCES

- 1) Barnachea, John Rey M. (2018) Tinola Is A Ginger and Onion Based Soup With Chicken As The Usual Main Ingredient. It is Authentic To The. <https://scribed.com>
- 2) Bidyut Mishra, Geeta Chauhan, Sanjod Kumar Mendiratta, B.D. Sharma (2015). Development and quality evaluation of dehydrated chicken meat rings using spent hen meat and different extenders. *Journal of Food science and Technology-Mysore*-52(4). <https://doi.org/10.1007/s13197-013-1197-2>
- 3) Bidyut Mishra, Jyotiprabha Mishra, Prasad Pati, Prasana Kumar Rath (2017). Dehydrated Meat Products: A Review, *International Journal of Livestock*. <https://doi.org/10.5455/ijlr.20170812035616>
- 4) Huai-Xiang Tian, Ya-Jing Zhang, Chen Chen, Lan Qin (2019). Effects of Natural Ingredients on the Shelf life of Chicken Seasoning. *Food Chemistry* 293(1). <https://doi.org/10.1016/j.foodchem.2019.03.084>
- 5) Jaime C. Cabarles Jr. (2008). Acceptability and shelf life of instant "ginataang darag" native chicken treated with different natural food preservatives. Jaro, Iloilo City: University Research Center, Central Philippine University. <https://repository.cpu.edu.ph/handle/20.500.12852/848>
- 6) Jerzy Stangierski, Grzegorz Lesniewski (2015). Nutritional and health-promoting aspects of poultry meat and its processed products. *World's Poultry and Science Journal* 71(01)71-82. <https://doi.org/10.1017/S0043933915000070>
- 7) Lili Zhang, Zhilin Hao, Chao Zhao, Zhang Yuyu (2021). Taste compounds, affecting factors, and methods used to evaluate chicken soup: A review, *Food Science & Nutrition*. <https://doi.org/10.1002/fsn3.2501>
- 8) Linda Fraser (2000). The practical encyclopedia of chicken cooking. The definitive collection: 200 step-by-step recipe
- 9) Michael Joseph, MSc (2023). Chicken Meat 101: Nutrition Facts and Health Benefits. <https://www.nutritionadvance.com/chicken-meat-nutrition-benefits>
- 10) Poultrymanual (2018). Native Chicken Product in the Philippines. <https://poultrymanual.com/native-chicken-production-in-the-philippines>
- 11) Serlene Tomar, G. Chauhan, Annada Das, S. Meshram (2022). Development of Ready to Cook Dehydrated Chicken Cutlet Mix and its Quality Changes During Storage at Ambient Temperature, *Journal of Dairying Foods & Home Sciences*. <https://doi.org/10.18805/ajdfr.DR-1870>

Study on Preparation and Shelf life of Chicken Tinola on the Go

- 12) Saranya, S, Rari Jhon, K (2012). Development and quality evaluation enriched moringa (*Moringa oleifera*) based soup mixes (ESM). Department of Home Science, College of Agriculture, Vellayani, Thiruvananthapuram, Kerala, India. www.homesciencejournal.com
- 13) S V Polyanskikh, M.M. Danyliv, U R Dubrovina, Olga N Ozherelyeva (2020). The Technology of Dehydrated Soup Base from Poultry Meat and Bone Residue. IOP Conference Series Materials Science and Engineering 941(1):012040. <https://doi.org/10.1088/1757-899X/941/1/012040>
- 14) Vanjo Merano (2023). Tinolang Manok Recipe. Panlasang Pinoy. <https://panlasangpinoy.com/classic-tinolang-manok-recipe>
- 15) Wallace Thomas (2022). What Is The Philippine Native Chicken. Stellina Food Blog. <https://stellinamarfa.com/meat/what-is-the-philippine-native-chi>