# Effect Of Preservative Methods on Organoleptic Characteristics of Broiler Chicken Neck Meat


## Abstract

*The effect of preservative methods on organoleptic characteristics of broiler chicken neck is investigated, forty pieces of broiler neck mat was purchased from ipata frozen meat shop, ten (10) pieces each of the meat part was fried and roasted and evaluation was carried out almost immediately after which ten (10) each was again fried and roasted and keep at room temperature for two (2) weeks and at the end of the two weeks, sensory evaluation was again carried out, after each taste the questionnaire was filled, the nine point edonic scale was used as questionnaire, the panelist were ten (10) each for both boys and girls with their ages ranging from 18-22 years old, the data collected was then analyzed using Randomized combined block design (RCBD) statistic tool and at the end the panelist preferred the roasted meat (P<0.05), this may be as a result of the heat that actually killed the microorganisms that can cause spoilage while the oil that was used in frying may be the cause of spoilage (rancidity) in fried meat*



**KEYWORDS**: Organoleptics characteristics, frozen, preservatives, edonic scale, Statistic tool.


## INTRODUCTION

The continuous rise in human population all over the world with annual average of 7 billion has brought an increase in the demand for animal protein. Estimated current level of consumption of protein in the world is 7g per caput per day (Lawal et, al., 2013).

If we must continue to produce food at our present rate, then there will be food scarcity in Nigeria and in deed all over the world, there is that need to increase the rate of food production to match the continuous increase in food production to avoid food scarcity and have food security (Lawal et, al., 2013).

In Nigeria, the average daily consumption of 54g protein with 6.5g from animal source falls below the recommended daily protein of 86g and 8.4g of protein from animal source (Abu, et.al., 2008)

To alleviate this situation, it has been realized that broiler production is the fastest and easiest route (Lara, 2008; Demirbas, 2009; Nworgu et al., 2000) since they are prolific, possess a high feed conversion ratio and are accepted by all, irrespective of religion.

Continuous production will at a point lead to excess and there will that need for storage or Preservation to support food security, various method of food preservation are available for commercial scale but those practiced by back yard farmers are to be considered in this study to avoid wastage from spoilage caused by microorganisms and this includes frying and roasting.

**Comment [MC1]:** Can be deleted because the word broiler already represents a type of chicken.
The alternative tittle: Effect of Processing Methods on Organoleptic Characteristic of Broiler Neck Meat or The Influence of Processing Methods on the Shelf Life of Broiler Neck Meat.

**Comment [MC2]:** The title writing is replaced with Arial 18 font.
The contents of the abstract are written upright, not italic.

**Comment [MC3]:** The abstract writing is replaced Caps.

**Comment [MC4]:** Explain tools and ingredients for frying and roasting time.

**Comment [MC5]:** Complete the location and duration of the research.

**Comment [MC6]:** This is results, nothing conclusion. Complete the results and conclusion

**Comment [MC7]:** Numbering 1 on the introduction not complete.

**1.2 Justification**

i-Continuous production of broiler birds lead to more of the meat

ii-Easier way of preserving meat is the cooking methods, refrigerating might be expensive for most Nigerians

**1.3 Objectives of the study**

i-Purchase the needed birds part for experimental reason

ii-Ten (10) broiler chicken neck each were then fried and roasted and store for 2 weeks

iii- Freshly prepared broiler neck by roasting and frying were evaluated for organoleptic characteristics and this were compare to the taste given after two (2) weeks

iv- Invite panelist for evaluation

## Materials And Methods

Site of the experiments: The experiment was carried out in the Agricultural garden of Kwara State Polytechnic, Ilorin,

Meat sample: The fifty (50) pieces of sizeable broiler chicken neck was purchased from cold room and thirty (30) were use for evaluation immediately, ten (10) each was boiled, fried and roasted while the remaining twenty (20) was used by frying ten (10) and then roast then and keep for evaluation  after two (2weeks)

Panelist: Twenty panelist was invited with ten (10) males and ten (10) females with their ages ranging from 18-23years old. They were all briefed on how to fill the questionnaire before embarking on it, and immidiatly after each taste the panelist has to rinse their mouth before tasting another sample,

Statistical analysis: All data collected was then collated and analysed using Randomised complete bloc design

Comment [MC8]: Numbering 2. on the material and methods not complete and writing the Material And Methods is replaced caps.

Comment [MC9]: All material content and methods are written in Arial, normal, 10 fonts, justified.
In the materials section please explain tools and ingredients for frying and roasting time.
In the methods section, please explain duration of boiling, frying and roasting broiler neck meat.

## RESULTS AND DISCUSSIONS

Comment [MC10]: Numbering 3. For writing the RESULTS AND DISCUSSION and numbering subheading

### 4.1 Results

Table 1 below shows the effect of cooking  methods on broiler chicken neck, significant difference occurred  in the colour of the meat (P<0.05), panelist preferred the roasted meat most and the least is fried one, this is the same result that was obtained with the meat when considering texture, though in this case the boiled meat is accepted least, the flavour, tenderness and juiciness is same with the fried meat being accepted most. . It is good to state here that the boiled meat value is just used as the control.

Table 1: Organoleptic characteristics of Broiler chicken neck cooked with different methods

| Cooking methods | Boil | Fry | Roast | SEM |
|---|---|---|---|---|
| **Colour** | $12.00^{b}$ | $21.36^{c}$ | $20.1^{a}$ | 1.4 |
| **Flavour** | $13.00^{c}$ | $24.03^{a}$ | $21.76^{b}$ | 1.7 |
| **Tenderness** | $21.00^{a}$ | $21.00^{a}$ | $19.00^{b}$ | 1.4 |
| **Juiciness** | $23.00^{b}$ | $25.00^{a}$ | $11.90^{c}$ | 6.1 |
| **Texture** | $14.03^{b}$ | $22.00^{a}$ | $21.73^{a}$ | 4.0 |

a, b, c and d withinthe same column with different superscripts are significantly different at (P <0.05).

**Comment [MC11]:** Add a photo of the research results so that you can clearly see the difference in color of boiled, fried and roasted broiler neck meat in the results and discussion section.

### 4.2 Discussion

The roasted meat is most preferred meat based on the panelist after preservation for two (2) weeks, this may be as a result to the fact that the roasted meat really kill the micro-organism that can cause damage, the oil used in frying may be a reason for the that instigated the damage in the fry meat that causes the panelist to preferred the roasted meat

**Comment [MC12]:** Explain which microorganisms are killed and why this occurs.

**Comment [MC13]:** How the damage occurred? Please complete any elements that are damaged and cause decay so that the organoleptic value is low and the shelf life is short.



### References

**Comment [MC14]:** All references are not updated.
Writing references does not comply with writing rules. especially when writing the year of publication.

Correct example for Journal:
Hilly M, Adams ML, Nelson SC. A study of digit fusion in the mouse embryo. Clin Exp Allergy. 2002;32(4):489-98.

Correct example for Book:
Beers MH, Porter RS, Jones TV, Kaplan JL, Berkwits M, editors. The Merck manual of diagnosis and therapy. 18th ed. Whitehouse Station (NJ): Merck Research Laboratories; 2006.


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