



Chemical and Technological Studies on Chicken Burger

BY

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6. SUMMARY

This study was aimed to preparation of chicken burger by replacement of chicken breast meat by (10%) wheat germ flour or (30%) steamed pumpkin pulp and addition of (1%) rosemary powder, and study the quality properties in the prepared products. Besides studying the quality properties during cold storage at $4\pm 1^{\circ}\text{C}$ for three weeks as well as frozen storage at $-18\pm 1^{\circ}\text{C}$ for three months.

The most important obtained results could be summarized as follows:

Replacement of chicken breast meat by (10%) wheat germ flour for preparing chicken burger:

- Improved the proximate composition by increasing significantly the crude fat, crude fiber, carbohydrate contents as well as the caloric value.
- Improved the physio-chemical properties which increased the cooking yield and the water holding capacity whereas decreased the cooking loss and shrinkage.
- Increased the poly unsaturated fatty acids content.
- Reduced the total bacterial count, yeasts and mould count compared with control.
- Not affect significantly on sensory evaluation of the final product.
- Finally it reduced the final coasts by 7.1%.

Summary

Replacement of chicken breast meat by (30%) pumpkin pulp for preparing chicken burger:

- Improved the proximate composition by increasing the ash, crude fiber and carbohydrate contents but, decreasing as well as the caloric value.
- Affected the physio-chemical properties which increased the cooking loss and decreased the water holding capacity, cooking yield and shrinkage.
- Incorporating of pumpkin pulp improved the fatty acids profile.
- Reduced the total bacterial count, yeasts and mould count compared with control.
- Improved the sensory evaluation of the final product compared with control.
- Finally it reduced the final costs by 27%.

Addition of (1%) rosemary for preparing chicken burger:

- Increased the ash, and carbohydrate contents while decreased moisture and protein contents.
- Improved the physiochemical properties which increased the cooking yield and the water holding capacity whereas decreased the cooking loss and shrinkage compared with control.
- Decreased the TBA value and peroxide value in control and treated products.
- Decreased the total bacterial count, yeasts and mould count in control and treated products.
- Decreased un significantly the sensory evaluation at zero time and during storage

Summary

Effect of cold storage ($4 \pm 1^{\circ}\text{C}$) for three weeks of the prepared chicken burger:

- Decreased the moisture, protein contents while increasing the crude fat, ash and carbohydrate contents as well as the caloric value.
- Affected the physio-chemical properties which increased the cooking loss, shrinkage, TBA value, peroxide value and decreased the water holding capacity as well as cooking yield in control and all treated products.
- Increased the total bacterial count, while yeasts and moulds were observed in the second week of storage in control and all treated products.
- Significantly ($p < 0.05$) decreased the sensory evaluation in control and all treated products.

Effect of frozen storage ($-18 \pm 1^{\circ}\text{C}$) for three months of the prepared chicken burger:

- Decreased the moisture, protein contents while increasing the crude fat, ash and carbohydrate contents as well as the caloric value.
- Affected the physio-chemical properties which increased the cooking loss, shrinkage TBA value, peroxide value and decreased the water holding capacity, cooking yield.
- Decreased the total bacterial count, while, yeasts and moulds were not detected in control and all treated products.
- Decreased un significantly the sensory evaluation in control and all treated products.