EFFECT OF PHYSICAL, NUTRITIONAL AND SENSORY PROPERTIES OF SAUSAGE INCORPORATED WITH DIFFERENT NON-MEAT INGREDIENTS

A.P.AYESHA SANDAMALI GUNASEKARA.

FACULTY OF AGRICULTURE
EASTERN UNIVERSITY
SRI LANKA

2019

ABSTRACT

Non-meat ingredients are used to impart flavor, slow bacterial growth and increase the yield of the sausage production. Therefore, the aim of this present study was to investigate the nutritional value, physical properties, microbial content and shelf life of chicken sausage incorporated with non-meat ingredients namely, soy protein powder, non-fat milk powder and potato starch at the rate of concentration 2% (w/w). Sausage samples were analyzed for physical, nutritional and sensory properties during refrigerated storage at -10°C. The nutritional, physical (moisture, dry matter, ash, fat, pH, texture and color) and sensory characteristics (colour, taste, texture, flavor and overall acceptability) were analyzed, at day 1, week 1, week 2 and week 3 of storage. Moisture, ash, dry matter, fat, pH, texture and color were significantly difference ($p<0.05$) among the treatments at day one. The results of this study revealed that, the dry matter (36.67±0.17%) ash (3.00±3.00%) and pH (6.45±0.03%) content were significantly ($p<0.05$) higher in chicken sausage incorporated with of potato starch. Fat content was significantly ($p<0.05$) higher in chicken sausage incorporated with soy protein powder (15.47±0.29%). Moisture was significantly higher in without added non-meat ingredient (control) sausage (70.74±0.12%). And hardness was significantly ($p<0.05$) higher in chicken sausage incorporated with of soy protein powder (4.8±0.3%).

During storage the ash, pH content and dry matter content were significantly ($p<0.05$) increased and fat content and moisture content was significantly ($p<0.05$) decreased storage period. At week one, the higher hardness value (4.8±0.3 N) showed in soy protein powder incorporated chicken sausage and least value (4.8±0.3 N) showed in without added non-meat ingredient (control) sausage. Organoleptic properties were

evaluated though the panel of 30 members. As a results of organoleptic characteristics revealed that, 2% of potato starch incorporated chicken sausage had the highest mean score of overall quality of all sensorial properties namely, color, taste, texture, flavor, and overall acceptability. Results revealed that most of the panelist accepted that sausage made from 2% of non-meat ingredient incorporated chicken sausage. Finally, it could be concluded that the non-meat ingredient is enriching the sausage manufacture and it is very much important in improvement of human nutrition.

TABLE OF CONTENTS

Title No. **Page No.**