

C226388 : MAJOR FOOD TECHNOLOGY
KEY WORD : SAUSAGE ANALOGUE/SOY PROTEIN

WILAIRAT MANEESATHEANRATTANA : PRODUCTION OF SAUSAGE ANALOGUE FROM
SOY PROTEIN. THESIS ADVISOR : ASSO. PROF. PANTIPA JANTAWAT, Ed.D.,
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Factors affecting quality of frankfurter sausage analogue including :
isolated soy protein (ISP) : gluten weight (100:0, 95:5, 90:10, 85:15, 80:20),
ISP rehydration (2.6, 2.8, 3.0, 3.2 times ISP weight), quantities of vegetable
shortening (17.5, 35, 52.5 % of dry protein weight basis), hydrolyzed
vegetable protein (HVP) (8, 12, 16, 20 % of dry protein weight basis) and salt
(3.5, 5.25, 7, 8.25 % of dry protein weight basis) were studied. The best
quality product found was composed of 90 g. ISP, 10 g. gluten, 35 g. vegetable
shortening, 8 g. HVP, 5.25 g. salt, 3.5 g. sugar, 3.5 g. pepper, 0.18 g.
cinnamon, 0.18 g. paprika. The rehydration volumes of ISP and gluten were 2.8
and 1.2 times their weights, respectively. For smoked sausage analogue,
sources of the textured soy protein (TSP) (Kaset protein®, Soyex®, Mincer®),
quantities of TSP (100, 200, 300 % of dry protein weight basis), vegetable
shortening (17.5, 35, 52.5, 70 % of dry protein weight basis), HVP (16, 24,
32, 40 % of dry protein weight basis), salt (10.5, 14, 17.5, 21 % of dry
protein weight basis) and dry egg white powder (0, 3, 6 % of dry protein
weight basis) were studied. The most appropriate formula found was composed
of 90 g. ISP, 10 g. gluten, 200 g. Kaset protein®, 17.5 g. vegetable
shortening, 16 g. HVP, 14 g. salt, 9 g. sugar, 9 g. pepper, 0.36 g. cinnamon,
0.36 g. paprika. Rehydration volumes of ISP, gluten and Kaset protein® were
2.8, 1.2 and 1.7 times their weights, respectively.

The shelf-life of the frankfurter analogue vacuum packed in HDPE bag,
and stored at 4°C was 18 days while that of the smoked sausage analogue was
15 days. Longer storage of both products resulted in yeast and mold growth
outside of the casing surface. At (-18)°C, both sausage analogues retained
their good eating qualities for more than 3 months.