



Effects of Different Humectants in the Physico-Chemical Properties of Ready-to-Eat (RTE) Tocino

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Abstract: This study was conducted to determine the effects of humectants in the physico-chemical properties of RTE dried tocino. The study was divided into three phases that involved standardization of procedure for dried tocino, determination of the effects of varying levels of different humectants on RTE dried tocino, and determination of appropriate drying time. Water activity (A_w), moisture content analyses, sensory evaluation, and statistical analysis were done. Hedonic Rating Scale and Multiple Comparison Tests were the methods used in Sensory Evaluation. Data gathered from the results were tabulated, analyzed and interpreted using Anova. The most acceptable RTE dried tocino underwent microbiological and nitrate content analyses.

Based on the results of A_w analysis, RTE dried tocino with 2.5%-7.5% glycerol ranges from 0.767-0.813; with propylene glycol, A_w ranges from 0.782-0.80; and with sorbitol, the A_w ranges from 0.814 to 0.842. The moisture content of RTE dried tocino with 2.5%-7.5% glycerol ranges from 22.802% to 25.48%; with propylene glycol, it ranges from 26.38%-27.69%. The results of sensory evaluation showed that RTE dried tocino with 2.5%-7.5% glycerol and sorbitol were acceptable in terms of color, flavor, and general acceptability. Propylene glycol was unacceptable at all levels. RTE dried tocino with propylene glycol is significantly different from RTE dried tocino with glycerol, sorbitol, and without humectants in terms of color, flavor, and general acceptability.

RTE tocino dried at different drying time has A_w that ranges from 0.783-0.886 and moisture content that ranges from 21.336%-36.000%. Based on Sensory Evaluation, RTE dried tocino at 1.5 hours is the most acceptable to the sensory panels. Microbial analysis of the most acceptable product revealed that RTE dried tocino has aerobic plate count of 3 cfu/g; negative for yeast and molds, *S. aureus* and *E. coli*. There was no nitrate residue found in the most acceptable RTE dried tocino.

Key Words: RTE dried tocino; humectants; Water activity; moisture content; sensory evaluation