

ABSTRACT



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ANTIOXIDANT ACTIVITY, NUTRITIONAL VALUES AND ORGANOLEPTIC TEST OF MARMALADE WITH ADDITION OF CARROT (*Daucus carota* L.)

xviii, VI Chapters, 96 Pages, 11 Table, 3 Pictures, 8 Attachments

Background: Oxidative stress due to free radicals can lead to degenerative diseases such as cardiovascular disease. For the prevention, high antioxidants food content is needed.

Objective: Identify antioxidant activity, nutritional values and organoleptic test of marmalade with addition of carrots.

Method: This is a experimental research with five formulations of marmalade with addition of carrot about 0 g, 25 g, 50 g, 75 g dan 100 g. Organoleptic test was assessed using Visual Analog Scale (VAS) instrument as well as identification of antioxidant activity with DPPH method and nutritional values by proximat analysis.

Result: The results showed that marmalade with the addition of carrots in the organoleptic test of the formulation F4 (100 g: 75 g) tended to be favored and had the desired characteristics. Results of antioxidant activity with DPPH method IC₅₀ values ranged from 16.54 to 19.82 ppm. The results of nutritional value for water ranged from 20.54±0.11 to 25.89±0.36%, ash ranged from 0.32±0.003 to 0.59±0.001%, protein ranged from 3.00±0.10 to 3.64±0.01%, fat <0.02%, carbohydrate ranged from 70.52±0.46 to 76.04±0.13% and fiber ranged from 1.31±0.11 – 1.88±0.04%.

Conclusion: This study showed marmalade with the addition of carrots significantly influence ($p \leq 0.05$) on antioxidant activity, nutrient values and organoleptic test (hedonic test: texture and hedonic quality: color, taste and texture) but did not significantly influence ($p > 0.05$) on the hedonic test: color, flavor, taste and overall and hedonic quality: flavor and overall. In the next study it is advisable to analyze the content of beta carotene and vitamin C.

Keywords: Marmalade, Carrot, Antioxidant Activity, Nutritional Values, Organoleptic Test

Bibliography: 70 (2002 - 2017)