

**FORTIFIKASI TEPUNG WORTEL (*Daucus carota L.*) TERHADAP  
KADAR  $\beta$ -KAROTEN, KUALITAS FISIK DAN SENSORIS  
BAKSO AYAM BROILER**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh fortifikasi tepung wortel terhadap kadar  $\beta$ -karoten, kualitas fisik dan sensoris bakso daging ayam broiler. Bahan yang digunakan yaitu daging ayam, tepung tapioka, bawang putih, STTP (*sodium tripolyphosphate*), garam, es batu, lada dan tepung wortel. Penelitian ini dilakukan dengan satu macam perlakuan yaitu penambahan tepung wortel. Level tepung wortel yang digunakan adalah 0, 1, 2 dan 3% dari berat daging. Pengujian yang dilakukan meliputi kadar  $\beta$ -karoten, uji kualitas fisik (pH, daya ikat air dan keempukan) dan kualitas sensoris (warna, rasa, aroma, tekstur, kekenyalan dan daya terima). Kadar  $\beta$ -karoten diuji dengan metode *Spectrofotometry*. Data kualitas  $\beta$ -karoten dan fisik dianalisis variansi pola searah (ANOVA) dan perbedaan yang signifikan diantara rerata dilanjutkan dengan uji *Duncan's Multiple Range Test* (DMRT). Data kualitas sensoris (warna, aroma, aroma, tekstur, kekenyalan dan daya terima) dianalisis secara statistik menggunakan analisis non-parametrik yaitu uji Hedonik *Kruskal-Wallis*. Fortifikasi tepung wortel berpengaruh sangat nyata pada pH ( $P < 0,01$ ), tetapi tidak berpengaruh pada daya ikat air dan keempukan. Fortifikasi tepung wortel berpengaruh sangat nyata pada warna, tekstur, kekenyalan dan daya terima ( $P < 0,01$ ), tetapi tidak berpengaruh terhadap rasa dan aroma. Semakin tinggi kadar tepung wortel akan meningkatkan kadar  $\beta$ -karoten bakso ayam broiler dengan level tertinggi pada level 3% yaitu sebesar 1.591,36  $\mu\text{g}/100\text{g}$ . Fortifikasi tepung wortel pada level 3% tidak mempengaruhi kualitas fisik bakso ayam broiler kecuali nilai pH. Fortifikasi tepung wortel menurunkan tekstur, elastisitas dan penerimaan dari bakso ayam broiler.

(Kata kunci: Bakso daging ayam broiler, Tepung wortel, Kualitas fisik, sensoris dan  $\beta$ -karoten).

## **FORTIFICATION CARROT FLOUR (*Daucus Carota L.*) ON $\beta$ -CAROTENE CONTENT, PHYSICAL AND SENSORY QUALITIES OF BROILER CHICKEN MEATBALL**

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### **ABSTRACT**

This study was conducted to determine the effect of fortification of carrot flour on  $\beta$ -carotene content, physical and sensory qualities of broiler chicken meatballs. The materials used were broiler chicken, tapioca flour, carrot flour garlic, fried onion, STPP (sodium tripolyphosphate), salt, pepper and ice water. This research was conducted with one treatment that was added of carrot flour. The level of carrot flour used was 0, 1, 2 and 3% by weight of meat. The tests included  $\beta$ -carotene content, physical quality test (pH, water-holding capacity and tenderness) and sensory quality (color, taste, flavor, texture, elasticity and acceptability).  $\beta$ -carotene content were tested by Spectrofotometry method. The data of  $\beta$ -carotene content and physical quality data were analyzed statistically by using one-way analysis of variance (ANOVA). The differences between means were analyzed by Duncan's New Multiple Ranges Test (DMRT). The data of sensory quality were analyzed statistically by using nonparametric analysis with Kruskal-Wallis Hedonic test. The fortification of carrot flour affected very significant on pH ( $P < 0.01$ ), but it had no significant on water-holding capacity and tenderness. The fortification of carrot flour affected very significant on color, texture, elasticity and acceptability ( $P < 0.01$ ), but it had no significant effect on taste and flavor. In conclusion, the higher level of carrot flour will improve the  $\beta$ -carotene content of broiler chicken meatballs with the highest level at 3% level that is equal to 1.591,36  $\mu\text{g}/100\text{g}$ . Fortification of carrot flour at level 3% does not affect the physical quality of broiler chicken meatball except pH value. Fortification of carrot flour decreases the texture, elasticity and acceptability of broiler chicken meatball.

(Keywords: Broiler chicken meatballs, Carrot flour,  $\beta$ -carotene, Physical and sensory quality).