

**PENGARUH PENAMBAHAN MINYAK JINTAN HITAM  
(*Nigella sativa* L.) TERHADAP AKTIVITAS ANTIOKSIDAN,  
KUALITAS KIMIA DAN SENSORIS BAKSO  
DAGING AYAM BROILER**

Rizki Dwi Setiawan  
20/455775/PT/08455

**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan minyak jintan hitam (*Nigella sativa* L.) terhadap aktivitas antioksidan, kualitas kimia, dan sensoris pada olahan bakso daging ayam broiler. Bahan yang digunakan pada penelitian ini yaitu daging ayam broiler, tepung tapioka, minyak jintan hitam, STPP, bumbu-bumbu (merica, bawang putih, bawang merah goreng, garam, penyedap), telur dan air es. Perlakuan pada penelitian ini adalah penambahan minyak jintan hitam (*Nigella sativa* L.) dengan empat level perlakuan yaitu 0; 0,2; 0,4 dan 0,6 % dengan pengulangan sebanyak empat kali pengulangan. Variabel yang diamati meliputi aktivitas antioksidan, kualitas kimia (kadar air, kadar protein, kadar lemak, dan kadar abu), sensoris (warna, aroma, rasa, tekstur dan daya terima). Aktivitas antioksidan dan kualitas kimia dianalisis menggunakan ANOVA untuk mengetahui ada tidaknya perbedaan pada tingkat  $\alpha = 0.05$  dan dilanjutkan dengan *Duncan New Multiple Ranges Test* (DMRT) jika ada perbedaan nyata. Kualitas sensoris berupa warna, aroma, rasa, tekstur dan daya terima bakso daging ayam dianalisis dengan uji non parametrik (Uji *Kruskal Wallis*). Hasil penelitian menunjukkan bahwa penambahan dengan level minyak jintan hitam berbeda berpengaruh nyata ( $P < 0,05$ ) terhadap aktivitas antioksidan dan kualitas kimia (kadar air, kadar protein, kadar lemak, dan kadar abu). Hasil penelitian pada uji sensoris menunjukkan penambahan dengan level minyak jintan hitam berbeda berpengaruh nyata ( $P < 0,05$ ) terhadap rasa dan tidak berpengaruh nyata ( $P > 0,05$ ) terhadap warna, aroma, tekstur dan daya terima. Kesimpulan hasil penelitian ini adalah penambahan minyak jintan hitam sampai level 0,2 % (P1) menghasilkan bakso ayam broiler dengan nilai aktivitas antioksidan, kualitas kimia dan sensoris yang terbaik.

**Kata kunci :** Bakso daging ayam, Minyak jintan hitam, Aktivitas antioksidan, Kualitas kimia, Sensoris.

## THE EFFECT OF ADDITIONAL BLACK CUMIN OIL (*Nigella sativa* L.) ON THE ANTIOXIDANT ACTIVITY, CHEMICAL AND SENSORY QUALITY OF BROILER CHICKEN MEATBALL

Rizki Dwi Setiawan  
20/455775/PT/08455

### ABSTRACT

This research aims to determine the effect of black cumin oil (*Nigella sativa* L.) addition on the antioxidant activity, chemical quality, and sensory in processed broiler chicken meatballs. The ingredients used in this study were broiler chicken meat, tapioca flour, black cumin oil, STPP, spices (pepper, garlic, fried shallots, salt, flavoring), eggs and ice water. The treatment in this research was the addition of black cumin oil (*Nigella sativa* L.) with four levels of treatment, namely 0; 0.2; 0.4 and 0.6% with four repetitions. Each treatment level is repeated four times. Variables observed include antioxidant activity, chemical quality (moisture, protein content, fat content, and ash content), sensory (color, aroma, taste, texture and acceptability). Antioxidant activity and chemical quality were analyzed using ANOVA to determine whether there was a difference in the level of  $\alpha = 0.05$  and continued with the *Duncan New Multiple Ranges Test* (DMRT) if there was a noticeable difference. Sensory qualities in the form of color, aroma, taste, texture and acceptability of chicken meatballs were analyzed by non-parametric tests (*Kruskal Wallis Test*). The results showed that the addition of different levels of black cumin oil had a significant effect ( $P < 0.05$ ) on antioxidant activity and chemical quality (moisture, protein content, fat content, and ash content). The results of the study on sensory tests showed that the addition of different levels of black cumin oil had a real effect ( $P < 0.05$ ) on taste and no real effect ( $P > 0.05$ ) on color, aroma, texture and acceptability. The conclusion of the results of this study is the addition of black cumin oil to the level of 0.2% (P1) produces broiler chicken meatballs with the best value of antioxidant activity, chemical and sensory qualities.

**Keywords:** Chicken meatballs, Black cumin oil, Antioxidant activity, Chemical quality, Sensory.