EVALUASI KUALITAS DAGING AYAM BROILER DENGAN PENERAPAN TEKNOLOGI *HURDLE*: IRADIASI GAMMA DAN BUBUK KETUMBAR (*Coriandrum Sativum* L.) SELAMA PENYIMPANAN SUHU 4 °C

INTISARI

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Penelitian ini bertujuan untuk mengetahui sifat kimia dan tekstur daging ayam yang dipengaruhi oleh penambahan bubuk ketumbar (CP) dan paparan radiasi gamma. Variabel utama mencakup penambahan bubuk ketumbar (CP) pada bahan kering (DM) dengan konsentrasi 0% dan 3%, dan dosis iradiasi gamma 0, 1, dan 2 kGy, dengan pengamatan dilakukan pada hari ke-0, 7, dan 14 penyimpanan. Analisis morfologi terhadap permukaan daging ayam broiler dengan menggunakan *Scanning Electron Microscope* (SEM) menunjukkan bahwa daging yang diradiasi (1 kGy dan 2 kGy) dengan bubuk ketumbar (CP) menunjukkan permukaan yang lebih halus. Penambahan bubuk ketumbar (CP) menurunkan parameter *lightness (L*)* ($p < 0,01$) dan meningkatkan nilai *redness (a*)* dan *yellowness (b*)* ($p < 0,01$). Penambahan bubuk ketumbar (CP) secara signifikan meningkatkan *firmness* ($p < 0,01$), dan *chewiness* sedangkan *gummines* selama penyimpanan 7 dan 14 hari mengalami penurunan. Sebagai kesimpulan, kombinasi bubuk ketumbar dan iradiasi gamma meningkatkan kelembutan dan kekenyalan daging. Bubuk ketumbar (CP) membantu mempertahankan warna daging pasca-iradiasi. Berdasarkan penelitian penambahan bubuk ketumbar (CP) mampu mempertahankan komposisi nutrisi keseluruhan, serta meningkatkan kandungan kalsium (Ca). Kombinasi penambahan bubuk ketumbar (CP) dan iradiasi gamma pada dosis 1 kGy direkomendasikan untuk mempertahankan tekstur dan sifat kimia daging ayam selama penyimpanan.

Kata kunci: Daging ayam, Bubuk ketumbar , Iradiasi gamma, Tekstur

EVALUATION OF BROILER MEAT QUALITY USING HURDLE TECHNOLOGY: GAMMA IRRADIATION AND CORIANDER POWDER (*Coriandrum Sativum L.*) DURING STORAGE AT 4°C

ABSTRACT

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This study aimed to determine the chemical properties and texture of chicken meat as influenced by the addition of coriander powder (CP) and exposure to gamma radiation. The main variables included the addition of coriander powder (CP) to dry matter (DM) with concentrations of 0% and 3%, and gamma radiation doses of 0, 1, and 2 kGy, with observations made on days 0, 7, and 14 of storage. Morphological analysis of the broiler meat surface using Scanning Electron Microscope (SEM) showed that the meat irradiated (1 kGy and 2 kGy) with CP showed a smoother surface. The addition of coriander powder (CP) significantly increased firmness ($p < 0.01$), and chewiness while gummines during 7- and 14-days storage decreased. The addition of coriander powder (CP) decreased Lightness (L*) parameter ($p < 0.01$) and increased redness (a*) and yellowness (b*) values ($p < 0.01$). In conclusion, the combination of coriander powder and gamma irradiation improved the tenderness and chewiness of the meat. Coriander powder (CP) helped maintain the color of the meat post-irradiation. Based on the research, the addition of coriander powder (CP) was able to maintain the overall nutritional composition, as well as increase the calcium (Ca) content. The combination of coriander powder (CP) addition and gamma irradiation at a dose of 1 kGy is recommended to maintain the texture and chemical properties of chicken meat during storage.

Keywords: Chicken meat, Coriander powder, Gamma irradiation, Texture