

KARAKTERISTIK FISIKO-KIMIA SALTED EGG YOLK POWDER DENGAN PENAMBAHAN EKSTRAK LENGKUAS (*Alpinia galanga* L.) SELAMA PENYIMPANAN

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INTISARI

Salted egg yolk powder merupakan kuning telur asin yang dibuat dengan cara pemisahan *albumen* dan *yolk*. *Yolk* kemudian direndam dalam larutan *brining* serta dikeringkan dengan metode *oven drying* dan ditepungkan. Penelitian ini bertujuan untuk mengetahui kualitas fisik dan kimia *salted egg yolk powder* dengan penambahan ekstrak lengkuas 0; 5 dan 10% selama penyimpanan 0; 15 dan 30 hari pada suhu *refrigerator*. Pengujian fisik yang dilakukan meliputi uji kelarutan dan stabilitas emulsi. Pengujian kimia yang dilakukan meliputi uji kadar air, protein terlarut, *free fatty acid* (FFA), garam dan nilai *thiobarbituric acid* (TBA). Analisis data menggunakan *two way ANOVA* serta diuji lanjut dengan *Duncan's New Multiple Ranges Test* (DMRT). Hasil penelitian menunjukkan level penambahan ekstrak lengkuas 5 dan 10% menurunkan kadar FFA (1,94 dan 1,83%) dan nilai TBA (5,55 dan 4,27 mg MDA/kg) secara sangat signifikan ($P < 0,01$), namun berpengaruh tidak signifikan ($P > 0,05$) terhadap kelarutan (56,61%), stabilitas emulsi (75,16%), kadar air (3,37%) dan protein terlarut (2,65%). Level penambahan ekstrak lengkuas 10% meningkatkan kadar garam (1,58%) secara signifikan ($P < 0,05$). Penyimpanan 15 dan 30 hari meningkatkan kadar FFA (2,04 dan 2,19%) secara signifikan ($P < 0,05$) dan nilai TBA (5,47 dan 6,06 mg MDA/kg) secara sangat signifikan ($P < 0,01$), namun berpengaruh tidak signifikan ($P > 0,05$) terhadap kelarutan, stabilitas emulsi, kadar air, protein terlarut dan kadar garam. Terjadi interaksi yang sangat signifikan ($P < 0,01$) antara penambahan ekstrak lengkuas (0; 5% dan 10%) dan penyimpanan (0; 15 dan 30 hari) terhadap nilai TBA. Kesimpulan penelitian ini, penambahan ekstrak lengkuas 10% pada *salted egg yolk powder* dapat meningkatkan kualitas kimia melalui penurunan FFA dan nilai TBA serta dapat mempertahankan kualitas fisik selama penyimpanan pada suhu *refrigerator*.

Kata kunci: *Salted egg yolk powder*, Kualitas fisiko-kimia, Pengeringan oven, Lengkuas, Penyimpanan.

PHYSICO-CHEMICAL PROPERTIES OF SALTED EGG YOLK POWDER ADDED WITH GALANGAL EXTRACT (*Alpinia galanga* L.) DURING STORAGE

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This study aimed to understand the physico-chemical properties of salted egg yolk powder added with galangal extract. Salted egg yolk powder was made from separated yolk of chicken egg. Yolk was soaked in brining solution, followed by drying proses in drying oven. Dried salted egg then be powdered in a food processor or blender. Galangal extract was added in different level i.e. 0; 5 and 10% in brining solution. Salted egg yolk powder was storage for 0; 15 and 30 days in refrigerator temperature. Salted egg yolk powder assessment in terms of physical (solubility and emulsion stability) and chemical (moisture content, soluble protein, free fatty acid (FFA), salt content and thiobarbituric acid (TBA) value). Data were analyzed using two way ANOVA followed by Duncan's New Multiple Range Test (DMRT). Additional level 5 and 10% of galangal extract decreased FFA (1.94 and 1.83%) and TBA value (5.55 and 4.27 mg MDA/kg) ($P < 0.01$), but it was no significant effect ($P > 0.05$) on solubility (56.61%), emulsion stability (75.16%), moisture content (3.37%) and soluble protein (2.65%). Additional level 10% of galangal extract had a significant ($P < 0.05$) effect on increasing salt content (1.58%). Storage at 15 and 30 days had a significant effect ($P < 0.05$) on increasing FFA (2.04 and 2.19%) and very significant effect ($P < 0.01$) on increasing TBA value (5.47 and 6.06 mg MDA/kg) ($P < 0.01$), but it was no significant different ($P > 0.05$) on solubility, emulsion stability, moisture content, soluble protein and salt content. There was a very significant interaction ($P < 0.01$) between additional level (0; 5 and 10%) of galangal and storage (0; 15, 30 days) on TBA value. It could be concluded that the additional 10% of galangal extract could be increasing the quality of salted egg yolk powder with the increasing on chemical quality (decreasing FFA and TBA value) and maintaining the physical quality during storage at refrigerator temperature.

Keywords: Salted egg yolk powder, Physico-chemical quality, Oven drying, Galangal, Storage.