

Farah Choirun Nisa. NPM 210331100106. Profil Geometri Mete Mentah dan Efek *Pre-treatment* Terhadap Proses Pengolahan Biji Mete dan Mutu Mete Goreng. Di bawah Bimbingan **Mojiono, S.TP., M.Si.** dan **R. Arief Firmansyah, S.TP., M.Si.**

ABSTRAK

Penelitian ini bertujuan untuk mengkarakterisasi profil geometri mete mentah serta menganalisis efek pre-treatment terhadap proses pengolahan biji mete dan mutu mete goreng. Karakterisasi dilakukan terhadap dimensi fisik mete mentah yang meliputi panjang, lebar, dan ketebalan, serta parameter turunan seperti diameter geometrik dan kebulatan. Selain itu, dianalisis pengaruh pre-treatment berupa perebusan dan penyangraian terhadap keutuhan biji, kadar air, warna, serta komposisi asam lemak pada mete goreng. Hasil penelitian menunjukkan bahwa mete mentah memiliki panjang rata-rata sebesar 30,28 mm, yang mengindikasikan keseragaman ukuran sebagai dasar dalam proses pengolahan. Perlakuan pre-treatment berpengaruh sangat nyata ($P < 0,01$) terhadap keutuhan biji mete, dengan perlakuan perebusan menghasilkan persentase keutuhan tertinggi sebesar 73,62%. Pada parameter warna, mete tanpa perlakuan memiliki nilai kecerahan (L^*) tertinggi sebesar 83,78, sedangkan perlakuan perebusan dan penyangraian masing-masing menunjukkan nilai sebesar 73,89 dan 76,67. Proses penggorengan menyebabkan perubahan warna yang tergolong sangat mencolok dengan nilai ΔE lebih dari 5. Selain itu, perlakuan perebusan yang dilanjutkan dengan penggorengan menghasilkan kandungan asam oleat tertinggi sebesar 59,74%. Secara keseluruhan, pre-treatment berperan penting dalam meningkatkan efisiensi proses pengolahan serta mutu mete goreng, terutama dalam mempertahankan keutuhan biji dan memengaruhi karakteristik fisik serta kimia produk akhir.

Kata kunci: kacang mete, profil geometri, pre-treatment, mutu, asam lemak

Farah Choirun Nisa. NPM 210331100106. Geometric Profile of Raw Cashew Nuts and the Effect of Pre-Treatment on Cashew Kernel Processing and Fried Cashew Quality. Supervised by **Mojiono, S.TP., M.Si. and R. Arief Firmansyah, S.TP., M.Si.**

ABSTRACT

This study aimed to characterize the geometric profile of raw cashew nuts and to analyze the effect of pre-treatment on cashew kernel processing and the quality of fried cashew nuts. The characterization included physical dimensions such as length, width, and thickness, as well as derived parameters including geometric diameter and sphericity. In addition, the effects of pre-treatment methods, namely boiling and roasting, were evaluated on kernel integrity, moisture content, color, and fatty acid composition of fried cashew nuts. The results showed that raw cashew nuts had an average length of 30.28 mm, indicating relatively uniform size as a basis for processing. Pre-treatment had a highly significant effect ($P < 0.01$) on kernel integrity, with the boiling treatment producing the highest integrity of 73.62%. In terms of color, untreated cashew nuts exhibited the highest lightness (L^*) value of 83.78, while boiling and roasting treatments showed values of 73.89 and 76.67, respectively. The frying process caused a highly noticeable color change with ΔE values greater than 5. Furthermore, the boiling followed by frying treatment resulted in the highest oleic acid content of 59.74%. Overall, pre-treatment plays an important role in improving processing efficiency and the quality of fried cashew nuts, particularly in maintaining kernel integrity and influencing the physical and chemical characteristics of the final product.

Keywords: cashew nut, geometric profile, pre-treatment, quality, fatty acids