PERUBAHAN KARAKTERISTIK SENYAWA GIZI, ANTI GIZI DAN KECERNAAN PROTEIN *IN VITRO* BIJI LAMTORO [*Leucaena leucocephala* (Lam.) de Wit] SELAMA PENGOVENAN DAN PENGGORENGAN

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INTISARI

Biji lamtoro merupakan salah satu tanaman polong-polongan dengan kandungan protein yang tinggi. Selain itu, tingginya kandungan senyawa anti gizi yang dimiliki juga dapat mengakibatkan penurunan nilai cerna proteinnya. Sehingga perlu dilakukan pengolahan agar dapat menurunkan kandungan senyawa antigizi didalamnya. Proses pengolahan tidak hanya berpengaruh terhadap senyawa gizi dan antigizinya, tetapi juga terhadap daya cerna protein dalam tubuh. Oleh karena itu, penelitian ini bertujuan untuk mempelajari perubahan senyawa gizi, antigizi, dan nilai cerna protein biji lamtoro setelah dilakukan proses pengolahan yaitu pengovenan dan penggorengan. Ruang lingkup pengujian yaitu analisis proksimat meliputi kadar air, abu, lemak, protein, dan karbohidrat *by difference*. Analisis antigizi meliputi senyawa tanin, mimosin, dan asam fitat, serta analisis daya cerna protein *in vitro*. Hasil penelitian menunjukkan bahwa pengovenan 5 menit dan penggorengan 3 menit dapat menurunkan kandungan gizi pada biji lamtoro dengan signifikan. Kemudian pengovenan 5 menit dan penggorengan 3 menit ada biji lamtoro sudah mampu menurunkan kandungan antigizi mimosin, tanin, dan asam fitat dengan signifikan. Selain itu, pengovenan 10 menit dan penggorengan 5 menit pada biji lamtoro sudah mampu meningkatkan nilai cerna protein dengan signifikan. Hasil penelitian tersebut dapat memberikan informasi mengenai perubahan senyawa gizi, antigizi, dan daya cerna protein biji lamtoro sehingga dapat dijadikan rujukan bagi masyarakat maupun peneliti untuk dimanfaatkan hasil olahannya.

Kata Kunci:

Antigizi; Kecernaan Protein; Biji Lamtoro; Proses Pengolahan

CHARACTERISTICS OF NUTRITIONAL COMPOUNDS, ANTINUTRITION AND IN VITRO PROTEIN DIGESTIBILITY OF LAMTORO SEEDS [*Leucaena leucocephala* (Lam.) de Wit] IN THE ROASTING AND FRYING PROCESS

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ABSTRACT

Seeds of lamtoro are legumes with a high protein content. In addition, the high content of anti-nutritional compounds that are owned can also result in a decrease in the digestibility of the protein. So it needs to be processed in order to reduce the content of anti-nutritional compounds in it. The processing process does not only affect the nutritional and anti-nutrient compounds, but also the digestibility of protein in the body. Therefore, this study aimed to study changes in nutritional compounds, antinutrients, and protein digestibility values of lamtoro seeds after processing, namely oven and frying. The scope of the test is proximate analysis including water, ash, fat, protein, and carbohydrate content by difference. Antinutritional analysis included tannin, mimosin, and phytic acid compounds, as well as in vitro protein digestibility analysis. The results showed that 5 minutes of oven and 3 minutes of frying could significantly reduce the nutritional content of lamtoro seeds. Then 5 minutes of oven and 3 minutes of frying with lamtoro seeds were able to significantly reduce the antinutrient content of mimosin, tannins, and phytic acid. In addition, 10 minutes of oven and 5 minutes of frying on lamtoro seeds were able to significantly increase protein digestibility. The results of this study can provide information on changes in nutritional compounds, anti-nutrients, and protein digestibility of lamtoro seeds so that they can be used as a reference for the community and researchers to use their processed products.

Keywords:

Antinutrients; Protein Digestibility; Lamtoro Seeds; Processing