PENGARUH PERKECAMBAHAN GELAP DAN TERANG TERHADAP KANDUNGAN ANTI NUTRISI ASAM FITAT KECAMBAH KACANG KOMAK (*Lablab purpureus*)

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Oleh

Adzra Zahra Ziva

1901554

KELOMPOK BIDANG KAJIAN MAKANAN

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Oleh

Adzra Zahra Ziva

Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana Sains pada Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam

ADZRA ZAHRA ZIVA

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disetujui dan disahkan oleh:

Pembimbing I

Amelinda Pratiwi, M.Si.

NIP. 920200419910505201

Pembimbing II

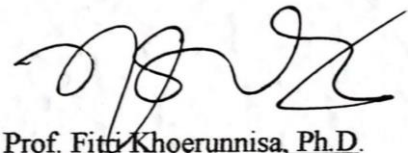
Dr. Siti Aisyah, M.Si.

NIP. 197509302001122001

Mengetahui,

Ketua Program Studi Kimia

FPMIPA UPI



Prof. Fitri Khoerunnisa, Ph.D.

NIP. 197806282001122001

ABSTRAK

Kacang komak (*Lablab purpureus*) merupakan tanaman pangan yang memiliki potensi gizi yang baik untuk mengatasi kasus stunting di Indonesia. Namun, adanya kandungan anti nutrisi asam fitat dalam kacang komak dapat menurunkan bioavaibilitas nutrisi didalamnya. Salah satu metode yang dapat dilakukan untuk mengatasi permasalahan ini yaitu perkecambahan. Penelitian ini bertujuan untuk mengetahui pengaruh kondisi perkecambahan gelap, terang biru, dan terang merah terhadap penurunan kadar asam fitat pada kecambah kacang komak serta mengetahui signifikansi perkecambahan gelap, terang biru, dan terang merah terhadap penurunan kadar asam fitat pada kecambah kacang komak. Proses perkecambahan kacang komak dilakukan selama 1-3 hari pada kondisi gelap dan juga terang dengan paparan sinar 12 jam per hari. Selanjutnya kandungan asam fitat dianalisis menggunakan metode kolorimetri dengan cara penambahan pereaksi Wade dan pengukuran absorbansi menggunakan spektrofotometer UV-Vis. Hasil penelitian menunjukkan bahwa perkecambahan gelap berhasil menurunkan kadar asam fitat kecambah kacang komak dengan kandungan terendah pada perkecambahan selama 3 hari dengan persentase penurunan sebesar 14,44%. Sedangkan pada perkecambahan terang, penurunan kandungan asam fitat terbesar dihasilkan dari perkecambahan selama 3 hari dengan radiasi sinar biru hingga 21,65%, jika dibandingkan dengan sinar merah yang menurunkan sebesar 17,80%. Hasil pengujian ANOVA satu jalur menunjukkan nilai $P<0,05$ yang artinya terdapat perbedaan signifikan antara perlakuan perkecambahan gelap, terang biru, dan terang merah. Berdasarkan uji Duncan, perkecambahan terang biru menunjukkan perbedaan yang paling signifikan dibandingkan perkecambahan terang merah dan gelap. Oleh karena itu, dapat disimpulkan bahwa perkecambahan terang dengan radiasi sinar tampak merupakan metode yang potensial untuk mengurangi kadar asam fitat pada kecambah kacang komak.

Kata Kunci: Asam Fitat, *Lablab purpureus*, Kecambah Kacang Komak, Perkecambahan, Gelap, Terang Biru, Terang Merah, Radiasi Sinar Tampak, Anti Nutrisi

ABSTRACT

Hyacinth bean (Lablab purpureus) is a food plant that has good nutritional potential to overcome stunting cases in Indonesia. However, the presence of the anti-nutritional content of phytic acid in the hyacinth bean can reduce the bioavailability of the nutrients in it. One method that can be done to overcome this problem is germination. This study aims to analyze the effect of germination conditions of dark, light blue, and light red on decreasing levels of phytic acid in hyacinth bean sprouts and to analyze the significance of germination of dark, light blue, and light red to decrease levels of phytic acid in hyacinth bean sprouts. The germination process of the hyacinth bean is carried out for 1-3 days in dark and light conditions with 12 hours of light exposure per day. Furthermore, the content of phytic acid was analyzed using the colorimetric method by adding Wade reagent and measuring absorption using a UV-Vis spectrophotometer. The results showed that dark germination succeeded in reducing the phytic acid content of the lowest content of hyacinth bean sprouts in germination for 3 days with a reduction percentage of 14.44%. Whereas in light germination, the largest decrease in phytic acid content resulted from germination for 3 days with blue light up to 21.65%, when compared to red light which decreased by 17.80%. The results of the one-way ANOVA test showed a P value <0.05, which means there was a significant difference between the dark, blue light and red light germination treatments. Based on Duncan's test, blue light germination showed the most significant difference compared to red light and dark germination. Therefore, it can be concluded that light germination with visible light is a potential method for reducing phytic acid levels in hyacinth bean sprouts.

***Keywords**: Phytic Acid, Lablab purpureus, Hyacinth Bean Sprouts, Germination, Dark, Blue Light, Red Light, Radiation, Visible Light, Anti Nutrition*

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