UJI EFEKTIVITAS EKSTRAK ETANOL BIT MERAH (*Beta vulgaris* L.) DAN BAYAM MERAH (*Amaranthus tricolor* L.) TUNGGAL DAN KOMBINASI TERHADAP KENAIKAN KADAR HEMOGLOBIN PADA MENCIT ANEMIA DEFISIENSI BESI

Hasya Nurhafizah Syahkina

Program Studi Sarjana farmasi

Institut Kesehatan Mitra Bunda

Dosen Pembimbing

apt. Rastria Meilanda, M.Sc

apt. Shinta Sari Dewi, M.Clin.Pharm

ABSTRAK

Anemia defisiensi besi menyebabkan penurunan kadar hemoglobin dan sering diatasi dengan tablet tambah darah yang memiliki efek samping. Bit merah (*Beta vulgaris* L.) dan bayam merah (*Amaranthus tricolor* L.) mengandung zat besi, asam folat, vitamin C, dan antioksidan yang berpotensi meningkatkan hemoglobin. Penelitian ini bertujuan mengetahui pengaruh ekstrak etanol bit merah, bayam merah, dan kombinasinya terhadap peningkatan kadar hemoglobin pada mencit (*Mus musculus*) anemia defisiensi besi. Penelitian eksperimental ini menggunakan rancangan *Post-Test Only Control Group Design* dengan 25 mencit jantan yang dibagi menjadi lima kelompok: kontrol negatif, kontrol positif, ekstrak bit merah, ekstrak bayam merah, dan kombinasi keduanya. Dosis ekstrak tunggal diberikan sebesar 130 mg/kgBB, sedangkan dosis kombinasi terdiri atas masing-masing 65 mg/kgBB ekstrak bayam merah dan 65 mg/kgBB ekstrak bit merah. Perlakuan dilakukan selama tujuh hari. Data dianalisis menggunakan uji *One-Way ANOVA* dan *Post Hoc Bonferroni*. Hasil menunjukkan semua perlakuan meningkatkan kadar hemoglobin secara signifikan dibandingkan kontrol negatif ($p < 0,05$). Kombinasi ekstrak memberikan peningkatan tertinggi dan efektivitas setara dengan kontrol positif. Kesimpulan: Ekstrak etanol bit merah dan bayam merah, baik tunggal maupun kombinasi (65 mg/kgBB + 65 mg/kgBB), efektif meningkatkan kadar hemoglobin dan berpotensi menjadi alternatif alami pengganti tablet tambah darah.

Kata kunci: anemia defisiensi besi, hemoglobin, bit merah, bayam merah, mencit.

EFFECTIVENESS TEST OF RED BEET (Beta vulgaris L.) AND RED SPINACH (Amaranthus tricolor L.) ETHANOL EXTRACT SINGLE AND IN COMBINATION ON THE INCREASE IN HEMOGLOBIN LEVELS IN IRON DEFICIENCY ANEMIA MICE

Hasya Nurhafizah Syahkina
Bachelor of Pharmacy Department
Institut Kesehatan Mitra Bunda

Supervisors

apt. Rastria Meilanda, M.Sc

apt. Shinta Sari Dewi, M.Clin.Pharm

ABSTRACT

Iron deficiency anemia causes a decrease in hemoglobin levels and is often treated with iron supplements that have side effects. Red beet (Beta vulgaris L.) and red spinach (Amaranthus tricolor L.) contain iron, folic acid, vitamin C, and antioxidants that have the potential to increase hemoglobin. This study aims to determine the effect of ethanol extracts of red beet, red spinach, and their combination on increasing hemoglobin levels in mice (Mus musculus) with iron deficiency anemia. This experimental study used a Post-Test Only Control Group Design with 25 male mice divided into five groups: negative control, positive control, red beet extract, red spinach extract, and a combination of both. The single extract dose was given at 130 mg/kgBW, while the combination dose consisted of 65 mg/kgBW of red spinach extract and 65 mg/kgBW of red beet extract, respectively. The treatment was carried out for seven days. Data were analyzed using One-Way ANOVA and Post Hoc Bonferroni tests. The results showed that all treatments significantly increased hemoglobin levels compared to the negative control ($p < 0.05$). The combination of extracts provided the highest increase and equivalent effectiveness to the positive control. Conclusion: Ethanol extracts of red beet and red spinach, either alone or in combination (65 mg/kgBW + 65 mg/kgBW), effectively increased hemoglobin levels and have the potential to be a natural alternative to iron supplements.

Keywords: iron deficiency anemia, hemoglobin, red beet, red spinach, mice.

HASYA HASIL TURNITN

ORIGINALITY REPORT

28%	28%	%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	repository.ub.ac.id Internet Source	2%
2	core.ac.uk Internet Source	1%
3	es.scribd.com Internet Source	1%
4	repositori.uin-alauddin.ac.id Internet Source	1%
5	123dok.com Internet Source	1%