

PENGARUH PEMBERIAN EKSTRAK TEH ALGA HIJAU-BIRU (*Nostoc commune*) TERHADAP KADAR KOLESTEROL TOTAL PADA TIKUS PUTIH (*Rattus norvegicus*) DIABETES

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ABSTRAK

Latar Belakang: Jumlah kasus dan prevalensi Diabetes Mellitus terus meningkat selama beberapa dekade terakhir. Pasien dengan diabetes sering memiliki kadar kolesterol cukup tinggi. Salah satu alternatif untuk menurunkan kadar kolesterol total dalam tubuh yaitu dengan memanfaatkan kandungan flavonoid dalam tanaman Alga Hijau-Biru (*Nostoc commune*) yang dijadikan sebagai minuman ekstrak teh. Flavonoid yang terkandung dalam ekstrak alga hijau-biru (*Nostoc commune*) dapat membantu menurunkan kadar kolesterol total dalam darah.

Tujuan: Mengetahui pengaruh pemberian ekstrak teh alga hijau-biru (*Nostoc commune*) terhadap penurunan kadar kolesterol tikus putih diabetes.

Metode: Penelitian ini menggunakan *Pre - Post Test with Control Group Design* dengan sampel tikus putih (*Rattus norvegicus*) sebanyak 30 ekor yang dibagi menjadi beberapa kelompok yaitu kelompok kontrol negatif, kelompok kontrol positif, kelompok perlakuan dengan dosis 90mg/200gBB, 180mg/200gBB, 360mg/200gBB, dan kelompok non diabetes dan diberikan dosis 180mg/200gBB. Analisis data menggunakan uji *One Way Anova* dan dilanjutkan uji *Post Hoc Test Duncan* dan uji *Paired Sample T-Test*.

Hasil: Pemberian ekstrak teh alga hijau – biru (*Nostoc commune*) dapat menurunkan kadar kolesterol total tikus diabetes. Pemberian ekstrak dengan dosis 360mg/200gBB merupakan dosis yang paling efektif dalam menurunkan kadar kolesterol total.

Kesimpulan: Ada pengaruh pemberian ekstrak teh alga hijau – biru (*Nostoc commune*) pada kadar kolesterol total tikus diabetes.

Kata Kunci: Alga Hijau-Biru (*Nostoc commune*), Diabetes Mellitus, Kadar Kolesterol Total

**THE EFFECT OF BLUE-GREEN ALGAE (*Nostoc commune*) TEA
EXTRACT ON TOTAL CHOLESTEROL LEVELS IN DIABETIC WHITE
RATS (*Rattus norvegicus*)**

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ABSTRACT

Background: The number of cases and prevalence of Diabetes Mellitus has continued to increase over the last few decades. Patients with diabetes often have fairly high cholesterol levels. One alternative to lower total cholesterol levels in the body is to make use of flavonoid content in the Blue-Green Algae plant (*Nostoc commune*) which is used as a tea extract drink. Flavonoids contained in Blue-Green Algae (*Nostoc commune*) extract can help lower total cholesterol levels in the blood.

Objective: Determine the effect of Blue-Green Algae (*Nostoc commune*) tea extract to decrease total cholesterol levels of diabetic white rats.

Method: This research used Pre - Post Test with Control Group Design with 30 sample of white rats (*Rattus norvegicus*) divided into several groups namely negative control group, positive control group, treatment group with dose of 90mg/200gBB, 180mg/200gBB, 360mg/200gBB, and non-diabetic group and given a dose of 180mg/200gBB. Data analysis using Annova's One Way test and continued Duncan's Post Hoc Test and T-Test Paired Sample test.

Result: Administration of Blue-Green Algae (*Nostoc commune*) can lower the total cholesterol levels of diabetic rats. Administration of extracts at a dose of 360mg/200gBB is the most effective dose in lowering total cholesterol levels.

Conclusion: There is an effect of Blue-Green Algae (*Nostoc commune*) tea extract on total cholesterol levels in diabetic rats.

Keywords: Blue-Green Algae (*Nostoc commune*), Diabetes Mellitus, Total Cholesterol Levels