

ABSTRAK

Pengaruh Pemberian Formula Tepung Tempe dan Jahe Merah Terhadap Kadar LDL (*Low Density Lipoprotein*) Tikus *Sprague Dawley* Diet Tinggi Kolesterol

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Tempe merupakan makanan kaya antioksidan isoflavon aglikon yang mampu mencegah oksidasi LDL. Jahe merah mengandung antioksidan gingerol dan shorgaol yang mampu mengaktifkan reseptor LDL untuk menurunkan kadar LDL. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian formula tepung tempe dan jahe merah terhadap kadar LDL.

Penelitian ini merupakan penelitian experimental murni dengan rancangan *Randomized post test only control group design*. Sampel penelitian 30 ekor tikus *Sprague Dawley* yang dibagi menjadi 5 kelompok. Kontrol negatif diberi pakan standar, kontrol positif diberi pakan standar dan pakan tinggi kolesterol, perlakuan 1 diberi tepung tempe 1,9 g selama 21 hari, perlakuan 2 diberi tepung jahe merah 0,036 g selama 21 hari, dan perlakuan 3 diberi formula tepung tempe 0,95 g dan jahe merah 0,018 g selama 21 hari. Kadar LDL diukur dengan metode CHOD-PAP. Data dianalisis dengan uji One Way Anova dan Mann Whitney.

Penelitian menunjukkan adanya pengaruh signifikan terhadap kadar LDL darah yaitu pada kelompok perlakuan tepung tempe 43,64 mg/dl, kelompok perlakuan tepung jahe merah 47,31 mg/dl, dan kelompok perlakuan formula tepung tempe dan jahe merah 39,06 mg/dl. Pengaruh kadar LDL pada kelompok perlakuan pemberian formula tepung tempe dan jahe merah lebih tinggi dibandingkan dengan perlakuan pemberian tepung tempe dan perlakuan pemberian tepung jahe merah. Hasil uji Kruskal Wallis menunjukkan bahwa terdapat pengaruh kadar LDL yang bermakna ($p = 0,004$) antara ketiga kelompok perlakuan. Terdapat pengaruh yang signifikan pada pemberian tepung tempe 1,9 g, tepung jahe merah 0,036 g, dan formula tepung tempe 0,95 g dan jahe merah 0,018 terhadap kadar LDL.

Kata Kunci: Tepung Tempe, Tepung Jahe Merah, Formula Tepung Tempe dan Jahe Merah, Kadar LDL

ABSTRACT

Effect of Giving Red Tempe and Ginger Flour Formula on LDL (*Low Density Lipoprotein*) Levels of *Sprague Dawley* High Cholesterol Diet

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Tempe is an antioxidant-rich food isoflavone aglycone that can prevent LDL oxidation. Red ginger contains antioxidants from gingerol and shogaol which can activate LDL receptors to reduce LDL levels. This study aims to determine the effect of giving tempe and red ginger flour formula to LDL levels.

This study was a pure experimental study with a Randomized post test only control group design. The research sample was 30 *Sprague Dawley* rats which were divided into 5 groups. Negative control was given standard feed, positive control was given standard feed and high cholesterol feed, treatment 1 was given 1.9 g tempe flour for 21 days, treatment 2 was given red ginger flour 0.036 g for 21 days, and treatment 3 was given tempeh flour formula 0, 95 g and 0.018 g red ginger for 21 days. LDL levels were measured by the CHOD-PAP method. Data were analyzed by One Way Anova and Mann Whitney tests.

The study showed a significant effect on blood LDL levels, namely in the treatment group tempeh flour 43.64 mg / dl, the treatment group of red ginger flour 47.31 mg / dl, and the group treated the formula of red tempeh and ginger flour 39.06 mg / dl. The effect of LDL levels on the treatment group given the formula of tempe and red ginger flour is higher than the treatment of giving tempe flour and the treatment of giving red ginger flour. The Kruskal Wallis test results showed that there were significant effects of LDL levels ($p = 0.004$) between the three treatment groups. There was a significant effect on the administration of 1.9 g tempeh flour, 0.036 g red ginger flour, and 0.95 g tempeh flour formula and 0.018 red ginger flour for LDL levels.

Keywords: Tempe Flour, Red Ginger Flour, Tempe Flour Formula and Red Ginger, LDL Level