

Pengaruh pemberian fortifikan fe fumarat dalam tepung tempe terhadap kadar zat besi plasma darah tikus (*rattus norvegicus l.*) jantan galur sprague-dawley = The effect of fe fumarate fortificant addition in tempeh flour on plasma iron concentration of male sprague dawley rats (*rattus norvegicus l.*)

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Abstrak

ABSTRAK

Telah dilakukan penelitian yang bertujuan untuk mengetahui pengaruh pemberian fortifikan Fe Fumarat dalam tepung tempe terhadap kadar zat besi plasma darah tikus (*Rattus norvegicus L.*) jantan galur Sprague-Dawley. Metode penelitian menggunakan Rancangan Acak Lengkap (RAL), terdiri atas 25 ekor tikus putih jantan yang dibagi ke dalam 5 kelompok perlakuan, yaitu KK 1 yang diberi larutan CMC 0,5%; KK 2 yang diberi CMC 0,5% dan suspensi tepung tempe tanpa fortifikan; dan KP 1, 2, dan 3 yang diberi CMC 0,5% dan tepung tempe dengan fortifikan Fe Fumarat dosis 1,35 mg Fe/ kgBB, 2,7 mg Fe/ kg BB, dan 5,4 mg Fe/ kgBB selama 21 hari berturut-turut. Pengambilan darah dilakukan pada hari ke-0 dan setelah pencekokan hari ke-21. Darah ditentukan kadar zat besinya dengan AAS (Atomic Absorption Spectrophotometer). Hasil uji Anava satu arah ($P < 0,05$) menunjukkan perbedaan nyata pemberian fortifikan Fe Fumarat dalam tepung tempe terhadap kadar zat besi antar kelompok perlakuan. Peningkatan kadar zat besi tertinggi terjadi pada KP 1 yaitu sebesar 13,21% terhadap KK 1 dan 11,48% terhadap KK 2.

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ABSTRACT

The effect of Fe fumarate fortificant addition in tempeh flour on plasma iron concentration of male Sprague-Dawley rats (*Rattus norvegicus L.*) had been studied. By using Complete Random Design (CRD), twenty five rats were divided into five groups, consist of normal control group (KK 1) which was administered with CMC 0.5%, treatment control group (KK 2) which was administered with CMC 0.5% and tempeh flour non fortificant, and three treatment groups which were administered with tempeh flour added with Fe Fumarate fortificant 1.35 mg Fe/KgBW (KP 1); 2.7 mg Fe/KgBW (KP 2); and 5.4 mg Fe/KgBW (KP 3). All of the five groups were treated within 21 consecutive days. The plasma iron concentration was measured by Atomic Absorption Spectrophotometer (AAS). One way ANOVA test ($P < 0.05$) showed significant effect of Fe Fumarate fortificant addition in tempeh flour intake on plasma iron concentration in all treatment groups. The highest increase of plasma iron concentration was detected on KP 1 which is 13.21% to KK 1 and 11.48% to KK 2.