

PENGARUH KONSUMSI KRIMER MENGANDUNG MINYAK NABATI TIDAK TERHIDROGENASI TERHADAP KARAKTERISTIK DIGESTA DAN KONSENTRASI sIgA TIKUS *SPRAGUE DAWLEY*

INTISARI

Oleh :

ERNA DWI SAFIRRA

19/440329/TP/12438

FiberCreme tipe 10 (FC10) merupakan varian produk FiberCreme™ yang dibuat tanpa penambahan zat aditif dengan memformulasikan kebaikan oligosakarida dan minyak nabati tidak terhidrogenasi. Perbedaan formulasi FC10 dengan FiberCreme™ komersial menarik untuk diteliti lebih lanjut, terutama terkait potensi prebiotik dan efeknya bagi imunitas. Potensi prebiotik dalam produk FC10 dan manfaatnya terhadap imunitas belum banyak diteliti. Penelitian ini bertujuan untuk mengetahui karakteristik digesta (berat digesta, kadar air, pH, dan konsentrasi *short chain fatty acid* (SCFA)) serta konsentrasi *secretory Immunoglobulin A* (sIgA) pada tikus *Sprague Dawley* setelah mengonsumsi FC10. Sebanyak 24 tikus *Sprague Dawley* jantan dibagi dalam 4 kelompok yaitu kontrol (KON), inulin (INL), B.1 (FC10 dosis 1), dan B.2 (FC10 dosis 2). Tikus diberi pakan AIN-93M dan sampel diberikan melalui *oral gavage* setiap pagi. Adaptasi tikus dilakukan selama 5 hari dan diikuti 28 hari perlakuan. Uji karakteristik digesta, SCFA dan sIgA dilakukan setelah tikus dikorbankan. Hasil penelitian menunjukkan bahwa pemberian FC10 tidak berpengaruh signifikan terhadap asupan pakan, berat badan tikus, berat total digesta, dan kadar air digesta. Nilai pH digesta kelompok inulin, FC10 dosis 1 dan dosis 2 secara signifikan ($p < 0,05$) lebih rendah dibanding kelompok kontrol. Intervensi FC10 dosis 1 dan dosis 2 belum dapat meningkatkan konsentrasi SCFA namun rasio molar propionat FC10 dosis 1 secara signifikan lebih tinggi dari kontrol. Pemberian FiberCreme FC10 dosis 2 lebih baik dalam memodulasi sIgA dibandingkan FC10 dosis 1.

Kata kunci : FiberCreme FC10, prebiotik, karakteristik digesta, SCFA, sIgA

EFFECT OF CREAMER CONTAINING NON-HYDROGENATED VEGETABLE OIL CONSUMPTION ON DIGESTA CHARACTERISTICS AND sIgA CONCENTRATIONS OF SPRAGUE DAWLEY RATS

ABSTRACT

By :

ERNA DWI SAFIRRA
19/440329/TP/12438

FiberCreme type 10 (FC10) is a FiberCreme™ variant made without the addition of additives by formulating the goodness of oligosaccharides and non-hydrogenated vegetable oil. Formulation difference of FC10 from previous types is interesting for further investigation, especially in its prebiotic potential and immunity benefits. This study aimed to determine digesta profile (digesta weight, moisture content, pH, and short chain fatty acids concentrations) and secretory Immunoglobulin A (sIgA) concentrations in *Sprague Dawley* rats after FC10 consumption. Twenty-four male rats were randomly divided into four groups, namely control (KON), inulin (INL), B.1 (FC10 dose 1), and B.2 (FC10 dose 2). Rats were fed AIN-93M and samples were given by oral gavage every morning. Adaptation was carried out for 5 days, followed by 28 days of intervention. Analysis of digesta profile, SCFA, and sIgA were performed after the rats were sacrificed. The results indicated that the administration of FC10 had no significant effect on feed intake, rats body weight, total digesta weight, and digesta moisture content. The pH value in the inulin group, FC10 dose 1 and dose 2 is significantly lower ($p < 0.05$) than the control group. FC10 intervention based on dosage could not increase the concentrations of SCFA, but propionate molar ratio of FC10 dose 1 was significantly than control. FC10 dose 2 administration is beneficial for modulating sIgA rather than FC10 dose 1.

Keywords : FiberCreme FC10, prebiotic, digesta characteristics, SCFA, sIgA