INTISARI

RAHASWARI, I., 2013, UJI EFEKTIVITAS SUSU PROBIOTIK SAPI DAN KAMBING TERHADAP GAMBARAN HISTOPATOLOGI HATI MENCIT YANG TERPAPAR FORMALIN, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Susu probiotik merupakan susu yang mengandung kultur aktif bakteri asam laktat (BAL) yang memiliki manfaat bagi tubuh seperti meningkatkan sistem imun dan menjaga kesehatan saluran pencernaan. Formalin apabila tertelan mengakibatkan kematian sel dan menyebabkan keracunan. Penelitian ini bertujuan mengetahui efektivitas susu probiotik sapi dan kambing dalam mengurangi kerusakan histologi hati akibat paparan formalin, dan mengetahui perbedaan aktivitas dari masing-masing terapi.

Penelitian ini menggunakan hewan mencit 30 ekor terdiri atas kelompok susu probiotik sapi (I), susu probiotik kambing (II), susu sapi (III), susu kambing (IV), kontrol normal (V), dan kontrol formalin (VI). Bakteri probiotik yang diinokulasikan ke dalam susu merupakan 3 jenis BAL dari starter yoghurt. Organ hati dibuat preparat histologi setelah 14 hari perlakuan dan diamati secara mikroskopis terhadap sel nekrosis.

Gambaran kerusakan yang terjadi antara lain degenerasi hidropik dan nekrosis. Persen nekrosis sel hati yaitu: kelompok I 31,8%, kelompok II 24%, kelompok III 35,5%, kelompok IV 27,5%, kelompok V 0%, dan kelompok VI 45,3%. Perbedaan persen nekrosis antara kelompok uji menunjukkan adanya perbedaan efektivitas pemberian susu probiotik sapi dan kambing dalam mengurangi kerusakan histologi hati mencit, dan yang paling efektif adalah susu probiotik kambing. Kandungan nutrisi di dalam susu kambing seperti protein, lemak, dan vitamin, serta keberadaan bakteri probiotik mampu mengurangi kerusakan oksidatif sel hati mencit akibat paparan formalin.

Kata kunci: susu probiotik, formalin, histopatologi hati

ABSTRACT

RAHASWARI, I., 2013, EFFECTS OF COW'S MILK AND GOAT'S MILK WITH PROBIOTICS TO HISTOPATOLOGICAL STRUCTURE OF MICE'S LIVER CELL WAS INDUCED BY FORMALIN, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Milk with probiotics is contain with active cultures of lactic acid bacteria (LAB), which has many benefits for body like increase immune system and maintain gastrointestinal health. Formalin if we consumed cause poisoning and made liver's cell damage. The study aims to determine effect of cow's and goat's milk with probiotic can reducing damage histological liver, which induce formalin, and knowing differences effects of some treatment.

This study used 30 mices with six test groups: cow's milk with probiotic (I), goat's milk with probiotic (II), cow's milk (III), goat's milk (IV), control normal group (V), and control formalin group (VI). Probiotic bacteria in milk is inoculated by three types LAB from starter yoghurt. This study was conducted 14 days, then made preparations liver histology and observed microscopically to cell necrosis like: piknotik, karioreksis, and kariolysis.

Picture of the damage are hydropic degeneration and necrosis . Results of percent necrosis of liver cells: group I is 31,8%, group II is 24%, group III is 35.5%, Group IV is 27,5%, Group V is 0%, and group VI is 45,3% . The difference of percent necrosis between test groups showed a difference effect of cow's and goat's milk with probiotic in reducing damage histological of liver's mice which induce formalin, and goat' milk with probiotic more effective than else. The content of nutrients in milk such as proteins, fats, and vitamins, also added probiotic bacteria can minimize oxidative damage to the liver cells of mice wich induce formalin.

Key words: milk with probiotik, formalin, liver histopatological