

## INTISARI

Penelitian terdahulu menyatakan bahwa air perasan umbi wortel (*Daucus carota*, L.) memiliki daya analgesik. Beta karoten banyak terkandung dalam wortel dan dapat berperan untuk menangkap dan menetralkan radikal bebas yang bertanggung jawab pada timbulnya nyeri. Untuk itulah penelitian ini dilakukan untuk membuktikan efek analgetik beta karoten dan mengetahui besarnya efek tersebut pada mencit putih betina.

Penelitian ini mengikuti rancangan penelitian eksperimental murni dengan pola acak lengkap satu arah. Metode uji yang digunakan adalah metode rangsang kimia, menggunakan asam asetat sebagai rangsang nyeri. Penelitian ini menggunakan 36 ekor mencit putih betina yang dibagi dalam 6 kelompok secara acak. Kelompok I merupakan kelompok kontrol negatif, kelompok II merupakan kontrol positif, sedangkan kelompok III, IV, V, dan VI merupakan kelompok perlakuan yang diberi beta karoten secara peroral dengan 4 peringkat dosis yaitu : 0,6523; 0,9225; 1,3046; 1,845 mg/kgBB dan diinjeksikan asam asetat 1% secara intraperitoneal setelah 10 menit pemberian bahan uji. Pengamatan yang berupa geliat mencit dilakukan setiap 5 menit selama 1 jam. Jumlah geliat kemudian diubah dalam prosentase proteksi geliat mengikuti persamaan Handershot-Forsaith. Data kuantitatif penghambatan terhadap geliat tersebut dianalisis menggunakan ANOVA satu arah dan dilanjutkan dengan uji Scheffe.

Hasil penelitian menunjukkan bahwa beta karoten memiliki efek analgetik yang ditunjukkan dengan kemampuannya dalam memberikan proteksi geliat. Persen proteksi geliat beta karoten dosis 0,6523; 0,9225; 1,3046; dan 1,8450 mg/kgBB berturut-turut adalah sebesar 41,04%; 78,01%; 66,11%; dan 59,95%.

Kata kunci : beta karoten, % proteksi geliat.

## ***ABSTRACT***

The previous research showed that the water of squeezed carrot (*Daucus carota*, L.) has an analgesics effect. Carrot contains much beta carotene which functions to catch and neutralize free radicals which responsibility in pain. Therefore, this research aims to verify the analgesics effect of beta carotene and then to recognize the degree of analgesics effect on white female mice.

The research was done by following the pure experimental research design by one way complete randome design. The experiment method which used was chemistry irritating method by using acetic acid as pain irritating. This research took 36 white female mice which randomly divided into 6 groups. Group I was negative control group, group II was positive control group, while group III, IV, V and VI were treatment groups which orally given by beta carotene with 4 dose levels, those were: 0,6523; 0,9225; 1,3046; 1,845 mg/kg BB and intraperitoneally injected by 1 % acetic acid in 10 minutes after the test composition had been given. The observation, which was the writhings of the mice, was done in every 5 minutes in one hour long. Later on, the accumulation of the writhings was changed into writhings protection percentage based on the equality of Handershot-forsaith. Isolating quantitative data toward the writhings was analyzed by using one way ANOVA and continued by Scheffe test.

The result of the research showed that beta carotene has analgesics effect which was proved by the ability in giving writhings protection. Intensively, the percentage of beta carotene writhings protection in the dose 0,6523; 0,9225; 1,3046; and 1,8450 mg/kg BB were 41,04 %; 78,01%; 66,11%; and 59,95%.

*Keywords* : beta carotene, writhings protection percentage