

ABSTRAK

MSG (*Monosodium Gluamat*) merupakan garam sodium dari salah satu asam amino non-esensial asam glutamat, yang akan berfungsi sebagai penguat dan penyedap rasa jika ditambahkan pada makanan, terutama makanan yang mengandung protein. Konsumsi MSG dalam jumlah besar akan menghasilkan radikal bebas. Toksik MSG (*Monosodium Gluamat*) dapat menyebabkan gangguan dan efek di organ pada hepar, ginjal, otak dan lain-lain. Efek toksik MSG (*Monosodium Gluamat*) bisa dilawan dengan antioksidan seperti beta karoten, asam fenolat, xanthones, flavonoid, epitaketin, catechin, vitamin E, vitamin C dan zat-zat mineral seperti mangan, seng, tembaga dan selenium (Se) yang juga berperan sebagai antioksidan eksternal. Tujuan penelitian ini untuk mengetahui potensi ekstrak teh hijau dan wortel serta kombinasi kedua ekstrak terhadap hepatosit yang terpapar MSG (*Monosodium Gluamat*). Perlakuan terdiri dari 9 kelompok perlakuan dengan 3 variabel pengamatan yaitu degenerasi, kongesti dan nekrosis. Terdapat hasil yang signifikan antara kontrol negative (mencit yang terpapar MSG) terhadap 6 perlakuan perawatan yaitu perlakuan ekstrak wortel dosis 200mg/bb/day, ekstrak wortel dosis 400mg/bb/day, kombinasi ekstrak teh hijau dosis 200mg/bb/day + wortel 100 mg/bb/day , dan kombinasi ekstrak teh hijau dosis 400mg/bb/day,+ wortel 200 mg/bb/day. Dengan demikian Teh hijau (*Camellia sinensis*) , wortel (*Daucus carota*) serta kombinasi ekstrak mampu melawan efek toksisitas dikarenakan terpapar MSG (*Monosodium Gluamat*) pada sel hepatosit mencit (*Mus Mucullus*).

ABSTRACT

MSG (*Monosodium Gluatamat*) is the sodium salt of one of the non-essential amino acids glutamic acid, which will function as a flavor enhancer and flavor enhancer if added to food, especially foods containing protein. Consumption of MSG (*Monosodium Gluatamat*) in large quantities will produce free radicals. Toxic MSG (*Monosodium Gluatamat*) can cause disturbances and effects on organs in the liver, kidneys, brain and others. The toxic effects of MSG can be countered with antioxidants such as beta carotene, phenolic acid, xanthenes, flavonoids, epitacithin, catechins, vitamin E, vitamin C and mineral substances such as manganese, zinc, copper and selenium (Se) which also act as external antioxidants. The purpose of this study was to determine the potency of green tea and carrot extracts and their combination against hepatocytes exposed to MSG (*Monosodium Gluatamat*). The treatment consisted of 9 treatment groups with 3 observation variables, namely degeneration, congestion and necrosis. There were significant results between negative controls (mouse exposed to MSG) against 6 treatments, namely carrot extract at a dose of 200mg/bb/day, carrot extract at a dose of 400mg/bb/day, a combination of green tea extract at a dose of 200mg/bb/day + carrot 14 mg/bb/day, and a combination of green tea extract at a dose of 400mg/bb/day, + carrots 28 mg/bb/day. Thus, green tea (*Camellia sinensis*), carrot (*Daucus carota*) and the combination of their extracts were able to counteract the toxic effects caused by exposure to MSG on hepatocyte cells of mice (*Mus Muculus*).