ABSTRACT

THE EFFECT OF THE ETHANOL EXTRACT OF MANGOSTEEN PEEL (Garcinia mangostana L.) ON BLOOD GLUCOSE LEVEL IN THE MALE RAT (Rattus norvegicus) STRAIN Sprague dawley EXPOSED BY HANDPHONE’S ELECTROMAGNETIC RADIATION WAVE WITH CHRONIC PERIOD

By

INAZ KEMALA DEWI

The increasing of handphone usage potentially induces arising blood glucose level. Antioxidant content of mangosteen peel (Garcinia mangostana L.) has an antidiabetic effect. This study aims to determine the effect of ethanol extract of mangosteen peel on blood glucose level in the male rat (Rattus norvegicus) strain Sprague dawley exposed by handphone’s electromagnetic wave with chronic period for 28 days. This study used 25 rats that were divided into 5 groups. K1 group is without treatment, K2 group is exposed by handphone’s electromagnetic wave for 3 hours and NaCl solution, and P1, P2 and P3 groups are exposed by handphone’s electromagnetic wave for 3 hours and extract of mangosteen peel is given consecutively by 50, 100 and 200 mg/kgBB. The results of mean blood glucose level (mg/dL) are K1: 140,9; K2: 143,9; P1: 157,4; P2: 157,8 dan P3: 131,6. The One Way Anova analysis showed a significant result (p=0,037). The conclusion of this study shows that ethanol extract of mangosteen peel with dosage 200 mg/kgBB has the effect towards blood glucose level in the rat exposed by handphone’s electromagnetic wave with chronic period for 28 days.

Key words: electromagnetic wave, glucose, handphone, mangosteen