

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

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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