

THE EFFECT OF THE ROOT OF SEREH (*Cympobogon nardus*) INFUSION BLOOD POTASSIUM PRODUCTION AND URINE PRODUCTION IN MALE WHITE RATS (WISTAR STRAIN *Rattus* *norvegicus*). A LABORATORY EXPERIMENTAL STUDY

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ABSTRACT

THE EFFECT OF THE ROOT OF *Syzygium nardus* INFUSION BLOOD POTASSIUM PRODUCTION AND URINE PRODUCTION IN MALE WHITE RATS (WISTAR STRAIN *Rattus norvegicus*). A LABORATORY EXPERIMENTAL STUDY

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The infusion of the root of *Syzygium nardus*, a traditional plant, has been known to have a function as alternative diuretics. However, it has not been proven experimentally. The objective of this study was to prove the effect of *Syzygium* root infusion on the increase of urine production and blood potassium in rats.

This study used separate sample pre-test post-test control group design, involving 28 randomly selected male *Rattus norvegicus*, aged 2-3 months, with body weight of 150-200 grams. Before treatment, the rats were subjected to body weight measurement and randomly divided into four groups, each comprising 7 rats. Group I was pre-test group, which received no treatment. Group 2 served as negative control group, receiving 2 ml distilled water per oral. Group 3 was positive control group, receiving distilled water and lasix of 0.72 mg. Group 4 was the group receiving 20% distilled water and *Syzygium* root.

Results showed that the infusion of *Syzygium nardus* root was able to increase rats urine production. In general, the result of analysis showed that pre-test group (KO) had urine production of 4.885 ± 2.832 cc/24 hours, blood potassium 4.0857 ± 0.3185 Mmol/L, and kaliuresis 54.1714 ± 21.4948 Mmol/L. Distilled water group (K1) had urine production of 7.7285 ± 3.05024 cc/24 hours, blood potassium 4.8286 ± 0.3352 Mmol/L, and kaliuresis 318.8286 ± 101.8018 Mmol/L. The group receiving distilled water and lasix of 0.72 mg/kg bw (K2) had urine production of 7.685 ± 3.8293 cc/24 hours, blood potassium 4.3571 ± 0.3599 Mmol/L and kaliuresis 315.7571 ± 106.6760 Mmol/L. Group receiving distilled water and the infusion of 20% *Syzygium* root (K3) had urine production of 8.5000 ± 1.035 cc/24 hours, blood potassium of 4.7857 ± 0.3848 Mmol/L, and kaliuresis 243.1429 ± 70.7855 Mmol/L. It was apparent that the infusion of *Syzygium* root was able to increase urine production, blood potassium, and kaliuresis.

Result showed that there are not significant difference ($p > 0.05$) of urine production, blood potassium was significant difference ($p < 0.05$) and kaliuresis was not significant difference. The result of LSD test revealed that the infusion of *Syzygium* was not able to increase urine production and increase blood potassium and kaliuresis.

Keywords: root of *Syzygium nardus*, increased urine production, blood potassium, kaliuresis

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