

**Doni Alfian, 2012, The Effect of Lerak (*Sapindus rarak*) Fruits n-butanol Fraction on the Cytology and Histology of The Female Mice (*Mus musculus*) Reproductive Tract, this Thesis was guided by of Dr. Alfiah Hayati and Dra. Listijani Suhargo, M.Si. Department of Biology. Faculty of Science and Technology. Airlangga University.**

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## ABSTRACT

This study aims to determine the influence of the length of time giving the lerak (*Sapindus rarak*) fruits n-butanol fraction on the number of vaginal epithelial cells, the diameter of the vagina and cervix of mice (*Mus musculus*) in a state of estrus and did not estrus. This experimental study consisted of two treatment groups, the first group injected with estrogenic hormone and the next group not injected estrogenic hormone. Each group is divided into 4 groups with different of time treatment with repeated 6 times. The length of time the treatment was tested in administered 0, 2, 4, and 6 hours with dose of lerak fruits n-butanol fraction was 600  $\mu\text{g}$  / mL intravaginally. The design used was completely randomized design. The number of vaginal epithelial cells obtained by vaginal smear and the vaginal and cervical lumen diameter obtained by histological incisions. The data of the number of vaginal epithelial cells and lumen diameter of the vagina and cervix are analyzed by the Kolmogorov-Smirnov test and then Homogeneity test and then ANOVA oneway. The results showed that mice injected with estrogenic hormone the mean number of vaginal epithelial cells that do not have cornified and cornified at 0, 2, 4, and 6 hours showed no significant difference for the groups of mice injected as like as did not injected estrogenic hormone. Meanwhile, the diameter of the vaginal and cervix lumen in the group injected with estrogenic hormone on the length of time 0, 2, 4, and 6 did not show significant differences, as well as the diameter of the vaginal and cervix lumen in the group not injected with estrogenic hormone. ANOVA results showed that length of the time by giving the lerak fruits n-butanol fraction was no effect on vaginal epithelial cell number and the diameter of the vagina and cervix.

Key words: Vaginal epithelial cells, saponin, vagina, cervix, and *Sapindus rarak*.