

Erinda Trias Wardani, 2012, The Influence of Ginger Extract (*Zingiber officinale* Rosc.) var. Elephants on the Quality of Spermatozoa of Mice (*Mus musculus*) after Exposure to 2-Methoxyethanol. This scription was guidanced by Dr. Alfiah Hayati and Drs. I.B Rai Pidada, M.Si, Department of Biology, Faculty of Science and Technology Airlangga University, Surabaya.

ABSTRACT

*The research has done to investigated the effect of various doses of ginger extract on the recovery quality of spermatozoa of mice (*Mus musculus*) after exposure to 2-Methoxyethanol. The quality of spermatozoa were observed include the count, morphology, motility, and viability of spermatozoa. The research used experimental animals in for 30 male mices (*Mus musculus*) strain BALB/C advanced in years 8-9 weeks with 23-27 g weight. Those mices were divided into 5 groups, each with consist 6 mices. K_0 is the positive control group were given 0.5 ml distilled water via gavage/day for 40 days. K_1 is the negative control group was given 200 mg/kg bw 2-ME through intraperitoneal/day for 5 days + 0.5 ml distilled water via gavage/day for 35 days. P_1 , P_2 , and P_3 is the treatment group were each given 200 mg/kg bw 2-ME through intraperitoneal/day for 5 days + ginger extract with variations of each dose 0,7 g/kg bw, 1,4 g/kg bw, and 2,8 g/kg bw via gavage/day for 35 days then has operation an took a part of cauda epididymis to get spermatozoa. The observations made on each mice to investigated count, morphology, motility, and viability of spermatozoa. The data was analyzed by ANOVA then continuing by LSD (Least Significant Differences). The results showed the count of spermatozoa of 5.238×10^6 sel/ml (K_0), 3.561×10^6 sel/ml (K_1), 5.100×10^6 sel/ml (P_1), 5.001×10^6 sel/ml (P_2), and 4.676×10^6 sel/ml (P_3). Morphology of spermatozoa of 73.0 % (K_0), 51.6 % (K_1), 72.8 % (P_1), 71.4 % (P_2), and 66, 3 % (P_3). Motility of spermatozoa of 7.619 $\mu\text{m/detik}$ (K_0), 4.491 $\mu\text{m/detik}$ (K_1), 7.489 $\mu\text{m/detik}$ (P_1), 7.248 $\mu\text{m/detik}$ (P_2), and 6.716 $\mu\text{m/detik}$ (P_3). Viability of spermatozoa of 70.0 % (K_0), 51.1 % (K_1), 69.1 % (P_1), 68.7% (P_2), and 64,7 % (P_3). The conclusion of this study is the gift of ginger extract 0.7 g/kg bw and 1.4 g/kg bw influential recover the count, morphology, motility, and viability of spermatozoa of mice after exposure to 2-ME.*

Keywords: ginger extract, 2-methoxyethanol, count, morphology, motility, and viability of spermatozoa.