ABSTRACT

Pratiwi, Anni Yunia. 2015. Effect of Ethanol Extract of Black Cumin (*Nigella sativa*) on sperm membrane integrity and *Malondialdehyde* Levels of MDA epididymis of mice (*Mus musullus*) exposed Lead (Pb) Acetate orally. Supervisor: Dr. Retno Susilowati M. Si and Mujahideen Ahmad M. Sc

Keywords: Pb Acetate, Ethanol Extract of Black Cumin (*Nigella sativa),* Malondialdehyde Levels of MDA, membrane integrity of spermatozoa, mice (*Mus musculus)*

Lead acetate is one of the sources of ROS can lead to lipid peroxidation and increased levels of *malondialdehyde* (MDA) induced by oxidative stress. One caused by oxidative stress is the disruption of the process of maturation of spermatozoa in the epididymis. This can be overcome by administration of ethanol extract of black cumin contains t*hymoquoinone* which act as antioxidants. Therefore the aim of this study to determine the effect of ethanol extract of black cumin on levels of *malondialdehyde* (MDA) and membrane integrity of spermatozoa in the epididymis of mice were exposed to lead acetate orally.

This study is an experimental study using completely randomized design (CRD) with 5 replications. Experimental animals used were mice strain Balb / c males aged 2-3 months who totaled 25 tails. The treatment in this study include the exposure of lead (Pb) 0.3 mg / g BW / day / orally for 7 days, and the ethanol extract of black cumin with a dose of 0.6 mg / g BB, a dose of 1.2 mg / g BB, and a dose of 2.4 mg / g BB for 15 days. The results observed in this study is the sperm membrane integrity and MDA levels epididymis, then analyzed by ANOVA single. If there is a very real difference then continued with LSD 1%.

ANAVA results showed that the ethanol extract of black cumin effect on sperm membrane integrity and MDA levels were exposed to lead acetate orally. Giving dose of 0.6 mg / g BB ethanol extract of black cumin is a dose that is effective in influencing sperm membrane integrity and affect levels of MDA epididymis of mice orally exposed to Pb.