

## ABSTRAK

*Green tea is one kind of Indonesia herbals, which is have counted abundantly, although ones is highly toxic. The purpose of this study in order to find out citotocicity of green tea obviously, whether its material safely in use. Green tea extract was diluted to obtain concentrations of 0.5 mg / ml, 1 mg / ml, 2 mg / ml, 4 mg / ml, and 8 mg / ml, and then it was exposed unto fibroblasts in cell culture for 1 hour. Later, it be replicated for 6 times. The positive control contains fibroblasts cells that put in a well without treatment. Thus, the negative control is a well that contains eagle media. In the second experiment, this study has the same concentration with the first one, but it used to the cell exposed for 24 hours. After this process has completed ,media in the TC plate removed and washed with PBS for 5 times and then added trypsine versene. Thus put in the MTT reagent into a well for four hours in an incubator at 37°C until the solution changes its colour become a purple product, then the DMSO was given to dissolve the formazan. The formazan optical density values calculated by Elisa reader at wavelength 630 nm. The results showing that the percentage of cells above 100% point out there is nothing death cells, but it could increase of proliferating cells. The level of proliferation of fibroblasts cells found in the lowest group of exposure given green tea extract with a concentration of 0.5 mg/ml. The tendency of increasing of proliferating cells of fibroblasts is raise to the concentrations of 4 mg/ml, then it drops to the concentration 8 mg/ml. The absence of fibroblasts cells's died might be caused by the polyphenols / catechins, which contains epigalokatekin 59.1%. It is the most potent component activity as an antioxidant. Increasing fibroblasts cells can also occur because of the influence of vitamin C in green tea that is high enough reach until 100-250 mg. This component as an antioxidant and also has functions in the synthesis of collagen. The conclusion is green tea extract concentration 0,5 mg/ml, 1 mg/ml, 2 mg/ml, 4 mg/ml, and 8 mg/ml are safe and it does not toxic for fibroblasts cells.*

**Key words :** *MTT assay, cytotoxicity, green tea*