

**ABSTRACT****CYTOTOXICITY TEST OF  
TINOSPORA CRISPA (L.) MIERS LEAF EXTRACT AS  
AN ANTIFUNGAL MATERIAL IN DENTISTRY****ABSTRACT**

**Background:** Extract of *Tinospora crispa* (L.) Miers leaf has the ability as an antifungal because it contains saponins, tannins, alkaloids, and flavonoid which can be used as an antifungal material in dentistry. As a good material in dentistry, extract of *Tinospora crispa* (L.) Miers leaf should be non toxic and biocompatible. Therefore it was necessary to do cytotoxicity test. **Purpose:** This study aims to determine extract of *Tinospora crispa* (L.) Miers leaf cytotoxicity towards the culture of BHK-21 fibroblasts cells using the MTT assay. **Method:** 56 wells in 96 well microplate which was containing fibroblast BHK-21 cell culture, cell and media controls filled with *Tinospora crispa* (L.) Miers leaf extract. Then, microplate was incubated for 20 h at 37 ° C in the incubator. Media on well was taken and new media was filled again. MTT was added to each well and was incubated again for 4 hours. DMSO was added to stop the MTT reagent. Cytotoxicity test results in the form of formazan optical density values was read using an ELISA reader by wavelength of 620 nm. Formazan optical density values were used for the calculation of the percentage of the number of living cells. This research was analyzed by one way Anova and Tukey HSD. **Result:** Percentage of living cells from consecutively 25%, 27,5%, 30%, 32,5%, and 35% were 56%, 55,7%, 56,44%, 55,68%, and 57,15%. Based on the LD<sub>50</sub> as the parameter of cytotoxicity assay, all of the value was over the limit of LD<sub>50</sub>. **Conclusion:** extract of *Tinospora crispa* (L.) Miers leaf at 25%, 27,5%, 30%, 32,5%, and 35% concentration is non toxic to the fibroblast (BHK-21) and can be used to antifungal material in dentistry by LD<sub>50</sub> parameter.

**Key words:** Cytotoxicity, *Tinospora crispa* (L.) Miers leaf, MTT assay, fibroblast