ABSTRACT

Background: Phaleria macrocarpa S., known as Mahkota Dewa, is a native fruit of Indonesia and nowadays it is used as alternative treatment of degenerative diseases. Mahkota Dewa is reported having significant antibacterial activities. Some studies have shown that Mahkota Dewa is potentially used as root canal irrigant. To obtain material for clinical use, it is necessary to do cytotoxicity test as an initial step in order to comply with biocompatibility requirement. Purpose: This study aims to prove the effects of Mahkota Dewa toxicity to fibroblast. Method: In this study, extract of Mahkota Dewa 3.125%, 6.25%, and 12.5% was diluted with RPMI-1640 to cytotoxicity test performed using the method of MTT assay on cultured cell lines fibroblast (BHK-21). Absorbance of formazan has read by using Elisa reader which indicates the number of living cell. Result: Optical density value from 3.125%, 6.25%, and 12.5% consecutively are 27.01%, 26.99%, and 26.81%. Based on the \( CD_{50} \) as the parameter of cytotoxicity assay, all of the value is below the limit of \( CD_{50} \). Conclusion: extract of Mahkota Dewa at 3.125%, 6.25%, and 12.5% concentration is toxic to the fibroblast (BHK-21) Keywords: Toxicity, Mahkota Dewa, MTT assay, fibroblast