

**UJI SITOTOKSISITAS EKSTRAK DAUN KENIKIR (*Cosmos caudatus*)  
TERHADAP SEL FIBROBLAS BHK-21**

**(CITOTOXICITY ASSAY OF KENIKIR (*Cosmos caudatus*) LEAF  
EXTRACT ON BHK-21 FIBROBLAST CELL)**

**ABSTRACT**

**Background.** Kenikir (*Cosmos caudatus*) is one of the Indonesian traditional plants which has benefits as appetite enhancer, boosters bones, drug of maag, and insect repellent. Its leaf has several chemical compounds such as flavonoids, polyphenols, terpenoids (essential oil), alkaloids, and saponins. It has MIC values against the growth of *S. aureus* and *C. albicans* at a concentration of 6.25 mg/ml. **Purpose.** The aim of this research is to know cytotoxicity levels of its extract for non-toxic usage in dentistry by using five different levels of concentration based on the value of MIC and continued with increasing it from 6.25 mg/ml to 12.5 mg/ml, 25 mg/ml, 50 mg/ml, and 100 mg/ml. **Method.** This study was done in-vitro experiment that each concentration consists of six samples of BHK-21 fibroblast cells. There were 30 samples with 5 different concentrations, 6 samples as cell control, and 6 samples as media control. So, there were totally 42 samples. Then, all samples were tested with MTT-assay and read by ELISA reader at a wavelength of 620 nm to count viability of cells. Citotoxicity levels are based on the  $IC_{50}$  standard. **Result.** There were life cells at all concentrations and the number were more than 50% of total cells. **Conclusion.** The liquid extract of *Cosmos caudatus* leaf is not toxic for BHK-21 fibroblast cell but it's optimal at concentration of 6,25 mg/ml.

**Key words:** *Cosmos caudatus*, cytotoxicity, MTT-assay