

Pengaruh Perbedaan Metode Ekstraksi Metabolit Sekunder Streptomyces sp. GMR22 terhadap Toksisitas pada Sel BHK-21

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Abstract	<p>Streptomyces sp. GMR22 is local isolate from Wanagama 1 Forest in Yogyakarta. They have the potential to be developed to produce active compounds because have PKS and NRPS genes. The active compounds from isolation are strongly influenced by various factors, one of them is extraction techniques. Effect difference of extraction technique will be affected by the quality of secondary metabolites produced. The purpose of this study was to compare the cytotoxicity effects of secondary metabolites of Streptomyces sp. GMR22 which have extracted with different stages from previous studies. The extraction technique was carried out by multilevel separatory funnel extraction methods, which was first extracted using non-polar solvent (n-hexane) and then extracted using semi-polar solvent (ethyl acetate). This research is important because in previous studies (separatory funnel only extracted using ethyl acetate) with the use of the lowest concentration in the dengue virus antiviral test (further test) caused 100% of deaths in BHK-21 cells. This study indicate that multilevel extraction result in lower CC50 value than previous studies. There are 49.160 $\mu\text{l/ml}$ (n-hexane extract) and 284.56 $\mu\text{l/ml}$ (ethyl acetate extract) while water extract is 464,38 $\mu\text{l/ml}$. FTIR compound analysis show that the three extracts produced have different spectrum patterns, especially in the n-hexane and ethyl acetate extract. Value of CC50 is not too high, it is expected that the secondary metabolites contained in the extracts can be used for further analysis such as antiviral testing because it is safe for normal host cells such as BHK-21 cells</p>
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