

The Antibacterial Activity of *Acanthus ilicifolius* L. n-Hexane Fraction

Title	The Antibacterial Activity of <i>Acanthus ilicifolius</i> L. n-Hexane Fraction
Author Order	2 of 3
Accreditation	
Abstract	<p>Background: Recently, with the high prevalence of diarrhoea caused by bacterial infection, the usage of antibiotics has increased. Antibiotic overuse might lead to several side effects and resistance, suggesting the development of an alternate antibacterial agent. A mangrove plant, <i>Acanthus Illinois</i>, contained triterpenoid, which has antibacterial properties. Aim: This study aimed to evaluate the antibacterial effect of the <i>Acanthus Illinois</i> n-hexane fraction against <i>Escherichia coli</i> and <i>Shigella dysenteriae</i>. Method: The <i>Acanthus Illinois</i> was fraction using n-Hexane, identification of secondary metabolite compound using GC-MS, and evaluation of antibacterial activity against <i>Escherichia coli</i> and <i>Shigella dysenteriae</i> under paper disc methods. This study was designed using a fully randomized design (CRD) with concentrations of fractions 1%, 2%, and 4%. The GC-MS results were compared to the WILEY 9 library and analysed. A prism graph was used to measure the inhibition zone of antibacterial activity. Result: The n-hexane fraction yield is 3.3% and contains sesquiterpene compounds (trans (beta.)-caryophyllene, alpha humulene, naphthalene decahedron-4A-methyl), terpenoid alcohol (3,7,11,15-tetramethyl -2-hexadecane-1-ol), and fatty acids (hexadecanoic acid methyl ester. <i>Acanthus Illinois</i> n-hexane fraction has antibacterial activity against <i>Escherichia coli</i> and <i>Shigella dysenteriae</i> in a dose-dependent manner. Conclusion: The n-hexane fraction of leaves <i>Acanthus ilicifolius</i> contains sesquiterpene, alcohol terpenoids, and fatty, and has antibacterial activity against <i>Escherichia coli</i> and <i>Shigella dysenteriae</i></p>
Publisher Name	Universitas Negeri Semarang
Publish Date	2022-01-22
Publish Year	2022
Doi	DOI: 10.15294/jstrp.v1i2.49615
Citation	
Source	Journal of Science and Technology Research for Pharmacy
Source Issue	Vol 1 No 2 (2021)
Source Page	48-56
Url	https://journal.unnes.ac.id/sju/index.php/JSTRP/article/view/49615/20887
Author	Apt TRIYADI HENDRA WIJAYA, S.Farm, M.Si