

## Identification of Active Compounds and Testing the Antioxidant Properties of Neem Leaf Extract

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<b>First Author</b>	
<b>Last Author</b>	
<b>Authors</b>	Septiyani, R; Wibowo, C;
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<b>Abstract</b>	<p>Due to its important role, the use of antioxidant compounds has recently grown rapidly. Antioxidant compounds are known to be able to inhibit auto oxidation through radical scavenging mechanism, by donating one unpaired electron in free radical which leads to a reduced number of free radicals. In Indonesia there are many of medicinal plants that have active chemical compounds which are likely to be potential sources of antioxidants, which is neem (<i>Azadirachta indica</i> A.Juss). This plant has been widely used in various fields including natural pesticides (biopesticide) and natural medicine. The purpose of this research was to identify the active chemical compounds in neem leaves extracts and determine the antioxidant activity of neem leaves and the effective solvents in extracting active compounds of neem leaves. The materials used in this study were Neem leaves (<i>Azadirachta indica</i> A.Juss) from Yogyakarta. There were 5 types of solvents used, including: Ethyl acetate, Ethyl acetate-ethanol, Ethanol, Ethanol-water and Water. Neem leaves is a potential resources for natural antioxidant. In addition to obtaining highest yield using Ethanol-Water as a solvent during the extraction process, this solvent also results better characteristic of extract than 4 other solvents. The properties of the extract that produced by extraction using Ethanol-Water is 2.067 g GAE/g extract, yield 1.39%, flavonoid 0.326 mg QE/g extract, antioxidant activity 226.118 ppm and reducing power 0.778 g BHT/g extract. Therefore, it is recommended that Ethanol-Water as a solvent for the extraction of active compound on neem leaves.</p>
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<b>Author</b>	CONDRO WIBOWO, S.TP, M.Sc., Ph.D