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Antioxidant & Antibacterial effects of Artichoke (*Cynara Scolymus* L.) leaf by various extract solvents

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Antioxidant is an important role to protect the human body against damage by reactive oxygen species. However, the excessive intake of such antioxidant is known to cause a serious poisonous influence on one's liver, lungs and circulating system. Therefore, it is necessary to develop a safe natural antioxidant. For the purpose of developing natural antioxidant and antibacterial, the antioxidant activity and antibacterial effects of various extract solvents from Artichoke (*Cynara ScolymusL.*) leaf were determined.

In this study, the extracts of Artichoke leaf dried from solvent extraction were examined by means of DPPH free radical scavenging activity and ABTS free radical scavenging activity. The effect of free radical scavenging compared with α-tocopherol and L-ascorbic acid. In Artichoke leaf extract, evaluated by using DPPH and ABTS showed that the highest antioxidant activities were found to be in methanol extracts from DPPH radical (IC_{50}: 20.06 μg mL^{-1}), ABTS radical (IC_{50}: 16.01 μg mL^{-1}) and followed by ethanol > methyl chloride > ethyl acetate > *n*-Hexane. By using disc diffusion method, the antibacterial activity showed that the Artichoke leaf extract was found to be most effective against all of the tested organisms and the methyl chloride extract showed the most significant antibacterial effect against all of tests among 5 solvents extract, followed by ethyl acetate > *n*-Hexane > ethanol > methanol. As a result, optimal in antioxidant activity for Artichoke (*Cynara ScolymusL.*) leaf is methanol extract and for antibacterial effect is Methyl Chloride extract.

Key words : Artichoke, DPPH, ABTS, solvent extract, Electron Donating Activity.

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