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Phytochemical Profile and Antioxidant Assay of Ethyl Acetateof *Lawsonia inermis* (Linn) Leaf Extract

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Abstract : Objectives.Previous study showed that tannin, flavonoid, saponin, antraquinone and glycoside were traced in ethyl acetate (EAE) of*Lawsonia inermis* Linn. leaf extract. EAE was also shown to have antihyperglycemic activity in streptozotocin-induced diabetic rats. Present study was conducted to identify chemical compounds in EAE by using spectrophotometry methods and evaluate its another bioactivity ie. as antioxidant.
Material and methods. EAE was obtained by serial extraction with *n*-hexane (HE) and ethyl acetate (EAE). EAE then analyzed using Ultraviolet-Visible Spectropscopy (UV-Vis), Fourier Transform Infra Red Spectropscopy (FTIR), and Gass-Chromatography Mass Spectrum (GCMS). Antioxidant assay was conducetd using DPPH method.
Results.The UV-Vis spectrophotometer illustrated that compounds in EAE had conjugated double bond. The FTIR analysis showed that EAE of *L. inermis* contained compounds with aliphatic, hydroxyl and carbonyl groups. The GC-MS analysis demonstrated that there were 4 chromatograms with molecular weight of (a)177, (b)222, (c)129 and (d) 95) with different fragmentation respectively. The antioxidant activity of EAE was strong (IC50=97.68 μg/ml, whereas vitamin C as standard was very strong (IC50=2.79 μg/ml).
Conclusions. EAE consists of compounds withconjugated double bond that have aliphatic, hydroxyl and carbonyl groups moieties. These compounds were suggested to contribute of EAE' antioxidant activity.
Keywords : phytochemical, antioxidant, *Lawsonia inermis* (Linn), leaf, ethyl acetate.

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