



Essential oils Isolated From Leaves of Egyptian *Verbena triphylla* L Herb Using Different Extraction Methods

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Abstract: As a part of an intensive screening program to introduce new source of essential oils (EO) to Egyptian industry, we aimed to evaluate the essential oils content of *Verbena triphylla* L leaves under the conditions of Egypt, Using two different extraction methods; hydro-distillation (HD) and solvent extraction (SE) to conclude whether of them is more efficient for producing high oil percentage with desirable composition. The plant materials were collected from fresh leaves and twigs of *Verbena triphylla* L shrub at full blooming stage. Maximum oil percentage was obtained with HD method compared with SE method. The components of essential oils isolated from leaves and twigs of *Verbena triphylla* L were identified by GC and GC-MS. The essential oil extracted either by water distillation or organic solvent contains the same main components Twenty five compounds were identified in the oil isolated by both methods, they represent approximately 95.69 % and 74.17 % for HD and SE extraction methods respectively. Citral (a+b) (23.25 %) is the major constituents in the oil isolated by DH method followed by D-limonene (16.11%), 1,8 Cineol (8.56%), Caryophyllen oxide (5.1%) and B-Citronellol (5.52%), while in absolute oil extracted from concrete, Citral (a+b) is the main constituent (28.34%) followed by B-Citronellol (9.32%) and Benzene, 1-(1.5 dimethyl-4-hexenyl)-4-methyl- (5.3%).

Keywords: *Verbena triphylla* L, Hydro-distillation, Solvent extraction Essential oil, Concrete, Constituents, Citral.

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