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A New Process for Green Extraction of Essential Oil From Eucalptus Diversifolia: Microwave-Assisted Hydro Distillation

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Nowadays, the increasing environmental concern and the develop of green chemistry stimulates the search for cleaner and less energy-intensive processes to extract the natural products from plants especially the essential oils, with shorten extraction time, reducing energy compsumption ,lower cost, and preventing pollution. Microwave-assisted hydro distillation (MAHD) is an alternative of green and eco-friendly process for extraction of the essential oil from the aromatic plant.
Eucalyptus is one of the diverse genus of flowering plants in the world belongs to the family Myrtaceae and comprises about 800 species [1]. Essential oils from Eucalyptus species have been approved as food additives, and the extracts are widely used in modern pharmaceutical and cosmetic industries [2].
In this study MAHD of Eucalyptus Diversifolia oil was investigated and a comparison was made with conventional hydro distillation (HD). Extraction time, yield and essential oil composition were considered as the principal terms of comparison. MAHD resulted in a shorter extraction time (35 min against 180 min for HD) and better quality of oil compared to that in conventional hydro distillation In conclusion MAHD is a green, energy saving and environmentally friendly extraction method of essential oil from Eucalptus Diversifolia .

Keywords: Microwave-assisted hydro distillation, Hydrodistillation, Essential oil, Eucalyptus Diversifolia.

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