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A simple method for extracting both active oily and water soluble extract (WSE) from *Nigella sativa* (L.) seeds using a single solvent system

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Abstract

The current study provides a way of extraction for both active NSO and WSE from *Nigella sativa* seeds using 98% methanol. About 1 kg of ground seeds was macerated by 1:2.5 w/v (g/mL) for 72 hours. After rotary evaporation and 7 days of continuous drying and chilling at 50 and 4 degrees C, NSO and WSE were obtained at the same instant. Solubility tests of 24 solvents and 11 thin layer chromatographic analyses while 2, 2-diphenyl-1-picrylhydrazyl free radical scavenging assay of NSO (73.66) , WSE (33.32) and NSO + WSE (78.22) against ascorbic acid (IC50 = 4.28 mg/mL) was performed. WSE was found to be highly soluble in water and 5% NaOH exhibiting the same Rf value of 0.95 for EtOH:DMSO (9:1) against the honey. WSE has revealed more than twofold higher anti-oxidant activity than others. Formulation of WSE with Tualang honey may provide better targeted hydrophilic drug delivery systems.

[GRAPHICS]

Keywords

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