A study on chemical composition of Ajowan (Trachyspermum ammi) essential oil produced in Qazvin

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Abstract

Background: Ajowan is one of the medicinal plant cultivated in Iran. The Ajowan essential oil is mostly used in food, health and pharmaceutical industries.

Objective: To determinate the chemical composition of Ajowan essential oil cultivated in Qazvin.

Methods: Twelve samples of Ajowan seeds were collected from a research farm (Qazvin Agriculture and Natural Resources Research Center) in 1381. The essential oil was obtained by hydro-distillation technique and further analyzed by GC and GC/MS for determination of chemical compositions.

Findings: The content of essential oil in different samples were ranging between 3.1% to 3.5%. Nine chemical constituents were indentified. Themol, δ-terpinene and p-cemene were the major constituents of oil.

Conclusion: Ajowan essential oil produced in Qazvin was mainly composed of thymol (40-45%).

Keywords: Ajowan, Plants Medical, Oil, Thimol, Gamaterpine, Paracemen