

P-146 (219)**STUDY ON THE QUANTITY OF ESSENTIAL OILEXTRACTED FROM PLECTRANTHUS AMBOINICUS AND PLECTRANTHUS COLEOIDES**

Mr. Ahmad Reza Kamaliun, Department of Horticultural Sciences, Tarbiat Modares University TMU, 8203 P.O.Box 14115-336, Tehran, Iran; kamaliun59@gmail.com (Presenting author)

Assist. Prof. Nima Ahmadi, Department of Horticultural Sciences, Tarbiat Modares University TMU, 8203 P.O.Box 14115-336, Tehran, Iran; ahmadin@modares.ac.ir

Assoc. Prof. Mohammad Hossei Mirjalili, Department of Agriculture, Medicinal Plants and Drugs Research Inst., Shahid Beheshti University, Tehran, Iran; m-mirjalili@sbu.ac.ir

More than 200 genera is belong to the family of lamiaceae, such as Thyme (*Thymus*), basil (*Ocimum*), mint (*Mentha*) and Lavender (*Lavandula*). *Plectranthus*, another major genus of this family with about 300 species growing in warm areas of the world, has numerous applications as medicinal plant in health care system by application of extracted aromatic essential oils. As a CAM plant, *Plectranthus* species with hygroscopic properties are very resistant to drought stress condition. In this study the quantity of essential oils was evaluated which extracted from *P. amboinicus* and *P. Coleoides* grown in Iran as Medicinal and ornamental plants respectively. Morphological characteristics showed that both species with fleshy leaves and stem are fragrant and having hanging pattern of growth, but the leaf to stem ratio in *P.amboinicus* is more than in *P.coleoides*. So that, biomass yield of *P.amboinicus* would be about 3 times more than *P.coleoides*. To extract essential oils, fresh leaves and stems of both species at the same age were hydro-distilled for 3 h via Clevenger-type apparatus with 3 replications. To assess the weight of dry matter, 10 g of fresh plant samples were dried in oven at 110 ° C for 3 hours. The yield of extracted essential oil was evaluated based on percentage of absolute dry weight. The highest percentage of essential oils was measured from *P.amboinicus* samples, comparing to *P. coleoides* 1.1w/w to 0.2w/w respectively. The solid composition and color of the essential oil was observed that further investigation is recommended to identify their compounds.

Keywords: Aromatic compounds, Crassulacean acid metabolism, Medicinal products