

P-140 (150)**DIFFERENT DRYING METHODS AFFECT THE QUALITY OF HYSSOP (*HYSSOPUS OFFICINALIS* L.)**

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Drying is one of the most important stages of post-harvest processing of medicinal and aromatic plants that plays critical role in their quality. Determination of the appropriate drying method has to be carried out based on the type of plant and the active substances. In this regard, an experiment based on a completely randomized design with three replications was conducted. Nine treatments (oven drying at 40, 50 and 60 °C, vacuum drying at 40, 50 and 60 °C, microwave drying at three power levels: 100, 500 and 1000 W) were carried out and some quantitative and qualitative characteristics were studied. The drying process was continued until the mass of the sample reduced to a moisture content of about 0.10 on a dry weight basis. The results showed that drying methods on the basis of the type of power source and the drying mechanism had significant effect on essential content and composition. Increasing the microwave output power and the temperature, resulted in a considerable decrease in drying time. The maximum essential oil content (0.75 % v/w) was obtained from oven-dried (40°C) samples but the lowest one (0.1 % v/w) was determined at microwave drying (1000 w). Different drying methods had considerable effect on essential oil composition, especially pinocamphone. According to these results, oven drying at 40°C and microwave drying at 100 w can be considered as appropriate drying methods for hyssop.

Keywords: Aromatic plant, Drying, Essential oil, *Hyssopus officinalis* L., Pinocamphone