

Abstract

Herb lemon balm and moldavian balm two are belonging to the family (Lamiaceae). Active substance both plants is mainly an essential oil. The most important environmental factors affecting the quantity and quality of Active substance medicinal plants are light and nutrients. Effect of light and compost to the active ingredient listed in the two pilot plants in the region was Khorramabad. Experimental design used split-plot randomized complete block design with three replicates were performed for both plants. The main factor of zero, 50 and 70% shading and the main plots and subplots, including compost fertilizer at three levels: 0, 20 and 40 kg ha were in sub plots. Results showed that the light treatments on plant height, branch number, branch length, leaf length, leaf number, fresh and dry weight, percent oil and lemon balm plant tillers was significant at 1% probability level. Leaf width was not significant. The levels of compost on plant height, leaf length, leaf number, fresh and dry weight, percent oil and lemon balm plant tiller was significant at 1% probability level. The number and length of branches was significant at the 5% level. Interactions on the length and leaf number, dry weight and percentage of significant oil 1% probability level and length of branches and plant height were significant at the 5% level. Moldavain balm of light treatments on plant height, number and length of branches, length and number of leaves, fresh and dry weight and percent oil content was significant at 1% probability level. Effects of compost on all properties except the dry weight were significant at 1% level. Effects on plant height, leaf length, fresh weight and significant at 1% probability level and leaf width were significant at the 5% level.

Keywords: Moldavain balm, lemon balm, light intensity, composting, ingredients



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**The effect of Light intensity and compost on
active substances in Balm (*Melissa officinalis*
L.) and Moldavian Balm (*Dracocephalum
moldavica* L.)**

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