Title Comparison on essential oil, menthol and menthon content of cultivated peppermint at Kermanshah

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Abstract

Peppermint with scientific name of *Mentha piperita* from Lamiaceae family is one of the medicinal and aromatic plants that its essential oil uses widely in medicinal, food, cosmetic and health industrials. Peppermint cultivated in different regions of Iran. This research was aimed to investigate for identification and selection of suitable cultivation region and effect of climate on essential oil, menthol and menthon content of peppermint in three different region in Kermanshah. At suitable time, shoot of peppermint harvested and dried, then volatile oil was extracted by stream distillation method. Volatile oil was analyzed by G.C and G.C/MS methods for identification, determination of menthol percent and another component. Result is shown change of amount essential oil and menthol content. Change of menthol was in range 14.41-39.95 and essential oil was in range 2.26-3.41. This variation is shown that essential oil and menthol content varied on different climatic condition. Climatic condition effected on quality and quantity essential oil in plant. Main components in three samples were menthol, menthone, pulegone, menthyl acetate and 1,8 cineole. Number of component differenced in range 38-56. Karoacrol component was not in any samples of Kermanshah. This research showed that sample of Sahneh has the highest quantity but the highest quality belong to sample of Kermanshah. Sample of Ghilan_gharb has the lowest of essential oil and the highest of menthon content that it is by reason of warmer climate.