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IDENTIFICATION AND QUANTIFICATION OF ALLELOCHEMICALS CONTAIN IN CERTAIN TOMATO CULTIVARS BY GC- MS TECHNIQUE

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ABSTRACT

The allelochemicals (secondary substance) contain in three cultivars of tomato , k-186 (resistant cultivar) in autumn plantation, 2014 and Alissia (resistant cultivar) in summer plantation,2014 and GS (susceptible cultivars) in summer and autumn plantations ,2014 were identified and quantitated using GC-MS technique. Results indicated that the allelochemical: 2-tridoconone, 2-undeconone, Zingiberene, TMTT (4,8,12-TriMethylTriDeca-1,3,7,11-Tetraene), DMNT (1,8-DiMethylNona-1,3,7-Triene) and Salicylic acid compounds were found in higher contents in resistant tomato cultivars compared to the susceptible one . However linalool and lycopene were found in slight amount increases in resistant cultivars especially (K-186 cultivars) than susceptible one. Thus, the susceptible cultivar (GS cultivar) is lower in quantity of investigated allelochemicals than resistant cultivars of tomato plant. The allelochemical that proved a role in resistance cultivars could be used as bioindicator for plant resistance to insects infestation in tomato cultivars.

Key words. Allelochemical, tomato cultivars , GC-MS.