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# Book of Abstracts
# Zbornik sažetaka

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# Volatile compounds of garlic cv. 'Istarski crveni' at different harvesting dates

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**Abstract**

Garlic (*Allium sativum*) is an important crop grown worldwide. Sulphur-containing compounds responsible for some of its key sensory characteristics and use in gastronomy and medicine can be affected by agricultural practices. The aim of this study was to define optimal harvesting date of garlic cv. 'Istarski crveni' by comparing the amounts of volatile sulphur compounds as quality indicators. Garlic was harvested three times every two weeks during June/July 2018. Seventeen volatile compounds in total were determined by HS-SPME-GC-FID-MS analysis. No significant difference between harvest dates was observed for the major volatiles, such as diallyl trisulfide, diallyl sulfide, methyl allyl disulfide, and diallyl disulfide which represented 98.5% of all of the determined compounds. Significantly higher content of minor allyl mercaptane and thieno[2,3-b]thiophene was found in the last when compared to the first harvest date. The first two principal components PC1 and PC2 explained 78% of the total variance and pointed to certain relations between harvest dates and particular volatiles. However, it was presumed that the technological maturity had probably been reached at the first harvesting date already, since similar amounts of volatiles were found during the monitored period.

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Keywords: agricultural practice, alliin, cultivar, gas chromatography, organosulfur compounds