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## RESIDUES OF POLYCYCLIC AROMATIC HYDROCARBONS IN DIFFERENT STAGES OF *CAPSICUM ANNUUM* (PEPPER) AND *SOLANUM LYCOPERSICUM* (TOMATO) GROWING

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### Abstract

Polycyclic aromatic hydrocarbons (PAHs) are included in the European Community (EC) and in the Environmental Protection Agency (EPA) priority pollutant list due to their mutagenic and carcinogenic properties. PAHs emissions from automobile traffic and industry activities were shown to influence the PAHs levels and profiles in vegetables grown nearby. The levels of 15 PAHs were determined in samples of pepper (*Capsicum Annuum*) and tomato (*SolanumLycopersicum*) in different stages of plant growing. Samples of each vegetable were collected in two different places, one from a rural garden far from the city (Slava Rusa) and the second place is an urban garden from Constantza city exposed to the city pollution. Samples of pepper and tomato plants were all Soxhlet-extracted in triplicate, cleaned up on silica gel column and analyzed by a multi-residue analytical method using gas chromatography with mass selective detection. Maximum value of total PAHs for peppers was 1.162 µg/kg and for tomatoes 0.903 µg/kg. PAHs concentration depends on the organ of the plant, the stage growing and on the level of area pollution.

*Key words:* PAHs, *Capsicum annuum*, *Solanum lycopersicum*, GC-MS

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