

Seventh Article: Sharing with another outside the specialization-Accepted for publication

publication	
	Monitoring and Risk assessment of pesticide residues in
Article title	tomatoes and cucumbers traded in Fayoum Governorate
	Markets, Egypt
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ABSTRACT

Tomato and cucumber are considered the most economically important vegetables in the world and are commonly consumed as fresh or raw. Pesticide residues in these vegetables pose health risks for humans. In this study, we detected 19 pesticides in a total of 36 samples of tomatoes and cucumbers from local markets in Egypt's Fayoum governorate using QuEChERS kits for sample extraction and clean up, followed by gas chromatography-mass spectrometry (GC-MS). Fifteen and fourteen pesticide residues were detected in tomatoes and cucumber, respectively, in the collected samples from Fayoum markets with concentrations above the maximum residue limits (MRL). A few pesticide residues were below the detection limit in samples from Itsa and Abshway markets. Moreover, the potential health risks to humans for detected pesticides were assessed using the health risk index (HI). Ethoprophos, chlorfenvinphos, terbufos, and atrazine showed the highest health risk index values in most samples. Thus, this study concluded that the importance of continuous monitoring and adequate supervision at local vegetables markets.

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