



2020, Chapter 22, pag. 472-490

Ecological Chemistry Aspects of Food Safety

Rodica Sturza

<https://doi.org/10.4018/978-1-7998-1241-8.ch022>

Abstract

The presented results reflect the researches carried out over the last decade, having as their object the soil, water, vegetal raw materials, and wines from the Republic of Moldova. The analysis of the possible anthropogenic contamination (NAA method) demonstrated the absence of systematic soil pollution. A total of 30 elements were determined in soil samples and the soil-leaves-fruit transfer factors were calculated. Approximately 3000 samples of local wines have been analysed to determine the residual quantities of pesticides. POPs were not found in any of the wine samples. In most of the examined cases (> 60% of samples), the lack of organic pesticide residues was observed. The migration of phthalates into different solutions from polymeric materials (PVC, rubber) and the influence of the temperature on the extraction rate were investigated. It has been shown that the contamination with phthalate residues occurs predominantly at the stage of grape processing, technological treatment, and storage.