HEAVY METALS CONTAMINATION LEVELS IN PROCESSED MEAT MARKETED IN ROMANIA

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Abstract

Atomic absorption spectrophotometry (AAS) technique was applied in order to identify the occurrence of certain heavy metals in samples of pork products, such as bacon, ham, sausage and salami, taken from four commercial centers in Romania. Lead levels in samples varied from 0.58 to 0.96 mg/kg, Cadmium values from 0.11 to 0.21 mg/kg, Copper from 0.73 to 1.32 mg/kg, while Zinc levels were detected between 32.19 and 42.12 mg/kg. Lead, Copper and Zinc found in samples were lower than the maximum levels recommended by the Food and Agriculture Organization (FAO) and the European Commission (EC), while Cadmium was quantified with values higher than the upper admitted threshold, of 0.1 mg/kg, as stated by the same authorities. From total of examined samples, sausage and salami contained the highest levels of heavy metals. The presence of heavy metals in pork product, even in small quantities, demonstrated the need for such determinations to ensure safe products for human consumption.

Key words: Atomic Absorption Spectrophotometry, heavy metals, pork product

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