CADMIUM POLLUTION OF SOME VEGETAL PRODUCTS FROM BRASOV AND DAMBOVITA COUNTY

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SUMMARY

Contamination with heavy metals is an important aspect in the continuous effort to maintain food safety. One of the metals with great toxicity is cadmium. Cadmium is a potential environmental hazard. Cadmium is considered as being a carcinogenetic compound and its chronically ingestion can modify the structure and function of kidneys, of the reproductive system and of bones. In the present paper, as part of a wider study regarding cadmium pollution in Romania, we followed the level of cadmium in vegetal origin foods from Brasov and Dambovita counties.

We analyzed the content of cadmium using the atomic absorption spectrometry, in samples randomly collected from shops, markets, or individual households.

We analyzed 9 types of fruit and vegetables (3 types of leafs, 3 types of fruit-vegetables, potatoes, carrots and fruits - cherries, apricots, peaches, prunes). We considered the European Committee regulation number 466/2001 for the maximum allowed limit (MAL) of cadmium in foods. From all, the following products had the medium level over the maximum admitted values: lettuce, spinach, eggplants, green beans, peppers, carrots, fresh fruits. The number of samples having a greater level of cadmium, compared with the maximum admitted values, among all the analyzed samples for every type of food, was situated between 10 and 99%. The highest level of cadmium load was found in lettuce, spinach and carrots, for the samples of both counties.

The chemical pollution with cadmium of foods is a real fact in our country and has different ways of manifestations and different degrees of intensity, in relation with the group of aliments, the cultivation method, the geographical area, the harvesting period, the processing methods, the storage, etc. Measures to lower the cadmium level in foods have to be taken, because of the high toxicity of the contaminant.

BIBLIOGRAPHY