

Assessment of pesticide residues in processed foods in Chile

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Abstract

Introduction: Pesticides can be present in food as a secondary waste treatment of the crops or contain high levels as a result of pollution. They produce public benefit by increasing agricultural productivity but also determine risks to human health.

Objective: To identify in a processed food sample based on fruits, vegetables and/or cereals ingredient the presence of pesticide residues and review these results in relation with the limits allowed in the Chilean and the European Economic Community food regulations.

Methods: In a convenience sample of processed foods made with fruits, vegetables and/or cereal ingredients: two samples of orange juices, two samples of infant foods based on cereals, five based on vegetables or fruits and one product based on cereals and vegetables, we tested the presence of pesticide residues using for assessing a multiresidue methods.

Results: Five samples showed pesticides residue. Carbaryl was found in one sample of orange juice (0.01 mg/kg), Iprodione in three food samples: plum and raisins, multi-fruit and peach mush (0.04; 0,01 and 0.08 mg/kg respectively) and pirimiphos-methyl (0.02 mg/kg) was found in the of asparagus soup.

Conclusion: Although the sample is not representative of the universe of the Chilean processed food, these results suggest the need to establish a surveillance system to ensure the safety of processed foods, especially in children, and define the maximum residue levels allowed in this kind of food.

Keywords

Author Keywords: Pesticide Residue; Pesticides; Foods

KeyWords Plus: MALE-RAT; IPRDIONE