

TRACE METALS AND PESTICIDE RESIDUES IN HONEY ON THE LITHUANIAN MARKET

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Summary. The amount of trace metals Pb (lead), Cd (cadmium), Zn (zinc), Cu (copper), Cr (chromium), Ni (nickel) and pesticide residues – alachlor, aldrin, dieldrin, azinfoso mitilo, brompropilate, chlordan, chlorveninfos, chlorpirifoso mitil, DDT, DDE, deltametrin, diazinon, dichlorvos, endosulfan, endrin, etion, fenitrotion, fenvalerat, fenofon, heptachlor, α -eksachorcikloheksan, lindan, β - heksachorcikloheksan, malation, metidation, paration, paration-metil, permetrin, fozolon, piperonil butoksid, piretroides, pirimifosmetil, kvintozen, ditiocarbonates (xanthates) were determined in samples of honey, collected from different parts of Lithuania and from Lithuanian market. The concentrations of trace metals in Lithuanian honey vary within a large range: Pb 0.018 ÷ 0.189 mg/kg, Cd 0.001 ÷ 0.014 mg/kg, Cu 0.188 ÷ 0.788 mg/kg, Zn 0.350 ÷ 41.25 mg/kg, Cr 0.200 ÷ 0.344 mg/kg, Ni 0.206 ÷ 0.350 mg/kg. In honey imported from Spain and Poland the amount of trace metals was higher: Pb 0.045 ÷ 0.147 mg/kg, Cd 0.006 ÷ 0.01 mg/kg, Cu 0.375 ÷ 0.725 mg/kg, Zn 1.04 ÷ 1.98 mg/kg, Cr 0.282 ÷ 0.425 mg/kg, Ni 0.247 ÷ 0.363 mg/kg, respectively. One sample of honey, which was collected in Kretinga surroundings and held in a barrel covered with zinc, was highly allocated with trace metals – Zn 41.25 mg/kg, Pb 0.189 mg/kg and Cd 0.14 mg/kg. This was 3-18. times higher compared to other samples. In all investigated samples there were no pesticide residues.

Key words: honey, trace metals and pesticide residues.