

Evaluation of the physical and chemical indices of different ranges of honey

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Abstract

Honey - the main product of the beekeeping industry, is appreciated for its nutritional properties and therapeutic effects. Honey is one of the most biologically complex products, in the composition of which there are quite important substances for the human body. Currently, one of the tasks of the beekeeping branch is to create the necessary conditions to obtain competitive beekeeping products on the European Union market, absolutely natural and of a superior quality without any residues or falsifications. Bee products are quite valued as particularly valuable and are in high demand. The basic purpose of beekeeping products is for them to be obtained, conditioned and processed in such a way as to preserve the totality of the original natural properties for as long as possible. These conditions can be respected if they are thoroughly known. If these conditions are not respected, so-called defects can be registered that can affect bee products up to the destruction of valuable properties. Following the research carried out on three varieties of honey, it was concluded that they fell within the organoleptic indicators for honey, namely by appearance, color, consistency, taste and smell. Laboratory research indicated an average honey moisture of 16.66%, acacia and linden honey had the same water content, with a lower percentage observed in polyfloral honey. The content of toxic metals Pb in the studied honey indicates an average presence of less than <0.02 mg/kg, the acidity indices varied between 0.8 – 1.6 milliequivalents per 100 g of honey, the average being 1.30 milliequivalents per 100 g, the content of oxymethylfurfural varied depending on the variety, in polyflora honey - 2.0 mg/kg, in acacia honey - 9.4 mg/kg and in lime honey - 8.1 mg/kg, on average - 6.50 mg/kg, the sucrose content was 1.0% in polyflora honey, 2.2% in acacia honey and 0.7% in linden honey. These values fall within the limits of the normative requirements provided by the European Union requirements for bee honey.

Keywords: Bee honey, Oxymethylfurfural, Organoleptic indices, Physico-chemical indices.