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ABSTRACTS

A first approach to the characterization of Portuguese Honeydew Honeys

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At the moment, the Portuguese honey sector is mostly focused on the production of monofloral nectar honeys that simultaneously have a greater market demand and commercially represent higher incomes for beekeepers. In Portugal honeydew honey production is frequently associated with lower quality product and therefore, in regions appropriated for this type of production (mountain regions of northeast with an abundant presence of *Quercus pyrenaica* and *Quercus rotundifolia*), the beekeepers use to post the harvesting season for latter summer, mixing nectar and honeydew, but guarantee the minimum physical-chemical parameters that would allow them to sell it as blossom honey. It is therefore uncommon to find pure Portuguese honeydew on the market. Even so, in Central Europe regions this type of honey is highly appreciated due to its strong flavour and taste associated recently with a higher content in antioxidants. This work, focused on physical-chemical analyses of honeydew honeys, aim to contribute for the valorisation of this production of honey among Portuguese beekeepers. The honeys studied were chosen from a wide group of 180 samples produced in 2007 by beekeepers of Northeast of Portugal and collected by the local beekeepers association, AAPNM. 30 samples were selected based on the apiaries locations and surrounding flora together with the organoleptic properties. These samples were analysed for humidity, pH, free acidity, lactones, conductivity, colour and content in phenolic compounds, following IHC methods. Colour was measured at 635 nm and converting to Pfund. The phenolic compounds were analysed for its total content and in terms of flavone and flavanone individual content using the Folin-Ciocalteau, the $AlCl_3$, and the 2,4-DNP methods. Additionally, a melissopalinology qualitative analyse was made using the method described by Von-Der-Ohe.

The pollen analysis revealed, not surprisingly, ratios of HDE/P lower than 3 what could reflect the floral origin of the honeydew and the low humidity conditions, but probably the presence of blend honeys. For other side the results for the physical-chemical parameters showed high values of pH and conductivity, 4,7-5,2 and 0,8 to 1,2 mS/cm, respectively. In terms of free acidity these honeys varies from 25-39 meq/kg, and were classified mostly as dark amber honeys. The amount of phenolic compounds is considerably high in these honeys, mostly due to the presence of flavone/flavonol rather than flavonone.

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