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**Sensory and physicochemical characterization of citrus, erica and lavandula honeys from Castelo Branco**

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Honey sensory evaluation is an important tool to distinguish the botanical origin of honey and to identify certain specific attributes (e.g. colour, crystallisation, astringency) and several defects (fermentation, impurities, off-odours). Some characteristics that can be revealed by sensory analysis can also be determined by other analytical systems (physico-chemical and melissopalynological).

In this study samples of the monofloral honeys more common in Castelo Branco region were tested: *Eucalyptus* spp., *Erica* spp. and *Lavandula* spp. Evaluation of unifloral conformity was carried out by laboratorial pollen analysis.

All honey samples were tested by the usual available physico-chemical tests: moisture content, aw, colour ( $L^*a^*b^*$ ), ash, pH, free acidity, electrical conductivity. All determinations were made using methods adopted by the International Honey Commission and Portuguese standards. Total phenol content was determined by a modification of the Folin–Ciocalteu method.

Sensory analysis was performed by using quantitative descriptive analysis of the 3 different monofloral honeys. Moreover, inquires to the consumers was used in order to evaluate the preference and the honey consumer habits.

Colour parameters namely  $L^*$  and  $a^*$  are important variables in grouping the samples with different phenol content. Those parameters can difference also the honey preference of the consumers. Principal component analysis was performed on sensory and physico-chemical variables for analysing the relationship among groups of variables, and grouping the samples in the multidimensional space.

Appearance, taste and aroma were described by untrained assessors and acid taste was strongly correlated with honey colour.

Honeys that were described as sweeter and less acid were preferred by untrained assessors, indicating that the usual consumer recognizes honey from *lavandula* as a standard.

Keywords: honey, sensory preferences, colour, phenol content