

Introduction and Objectives

The honey is an alimentary product very appreciated due to his aroma, flavor and nutritional quality. The sensorial analysis is important in the evaluation of the quality and identification of monofloral honeys. It considers attributes as color, aroma, consistence and flavor. These are interlinked and they depend on volatile substances related with the fragrance of the flowers where the nectar was collected. The aroma and the flavor are related also directly with the color of the honey.



The objective of this work was to evaluate the pollen profile and sensorial of four honeys from biological production.



Material and Methods

❖ Samples:

Four honey samples with colors ranging from light amber to dark amber gathered in Tras-os-Montes in 2012.



Kept in the dark at 20 ° C until analyzed.

❖ Pollen analysis:

The determination of the botanical origin was based on pollen spectrum proposed by Louveux *et al* (1978).



❖ Sensorial Analysis:

- The sensory analysis of different honeys was performed by a panel of tasters consumers, formed by 50 tasters.
- The panel evaluated the product through a structured nine-point scale (1 indicated to be very unpleasant and very pleasant 9) for each of the attributes (consistency, color, aroma, flavor and global appreciation).
- For statistical analysis we used a fitted various programs, including computer: Microsoft Excel 2010 and XLSTAT 2013.4.07, involving analysis of simple and multivariate regression, analysis of variance, principal component analysis (PCA) and analysis generalized Procrustes (APG), applying the F-test at a significance level of 5%.



Results

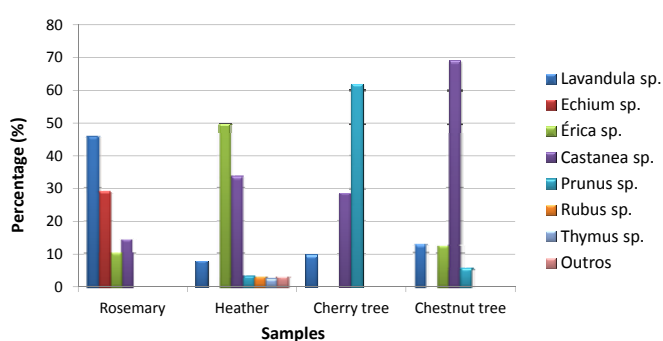


Figure 1 - Palynological characterization of honey samples

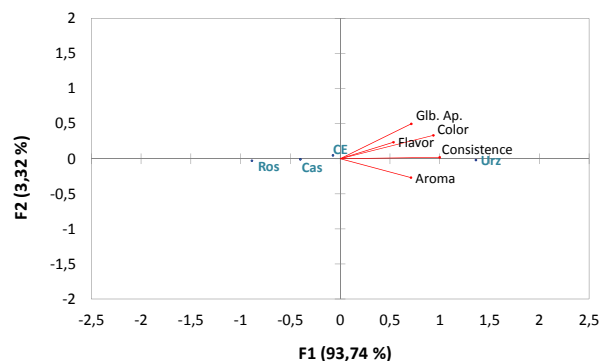


Figure 2 - Coordinates of the objects (ACP).
 Glb. Ap. – Global appreciation; Ros – Rosemary; Cas – Chestnut tree; Ce – Cherry tree; Urz - Heather

Conclusions

- The honey samples collected by beekeepers in Trás-os-Montes can be classified as monofloral rosemary honey (*Lavandula sp*), heather (*Erica sp*), cherry tree(*Prunus sp*) and chestnut tree (*Castanea sp.*)
- It was verified that the attributes that the consumers got to evaluate more easily and whose contribution for the global appreciation was more accentuated were the color, the flavor and the consistence.
- Regarding to the global appreciation the heather honey presented high values in the scale of preferences respecting to color, flavor and consistence and, intermediate values for the aroma.
- The rosemary honeys, chestnut tree and cherry tree were those that the consumers attributed the lowest punctuation.