Preliminary results of Slovenian sweet cherry honey characterization

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Beekeepers have begun using new beekeeping techniques to exploit previously untapped sources of bee pastures. As a result, the production of lesser-known honey types has been steadily increasing. In recent years, beekeepers from the Coastal–Karst region and southeastern Slovenia have begun producing sweet cherry (*Prunus avium*) honey with growing consistency. The objective of this study was to determine the characteristics of this lesser-known monofloral honey and to assist beekeepers in its proper labeling.

A total of 11 sweet cherry honey samples were collected between 2023 and 2025. Physicochemical parameters, including water content, electrical conductivity, and the fructose-to-glucose ratio, were analyzed using standard analytical methods (refractometry, conductometry, and HPLC). The samples were analysed for pollen content using standard melissopalynological methodology. The quantitative sensory profile was determined by a six-member trained panel of honey assessors.

The water content of the samples analyzed ranged from 14.6% to 17.0%. Electrical conductivity varied between 0.60 and 1.12 mS/cm, with an average value of 0.85 mS/cm. Five (45%) samples exhibited an electrical conductivity exceeding 0.80 mS/cm. The fructose-to-glucose ratio ranged from 1.07 to 1.47, with a mean value of 1.24.

The average proportion of *Prunus* pollen was 24%, ranging from 5% to 58%, based on total pollen count. The sample containing only 5% *Prunus* pollen contained a very high content of *Myosotis* pollen (87%). On average, the most abundant pollen types were *Acer*, *Prunus*, *Myosotis, Castanea sativa*, and *Salix*, listed in descending order of representation. When excluding pollen from over-represented and non-nectariferous plants, the proportion of *Prunus* pollen ranged from 15% to 68%.

In the liquid state, the honey samples exhibited a color ranging from medium amber to dark amber. Natural crystallization may occur rapidly; in the crystallized state, the color ranged from light amber to light amber with a grey-green hue. The taste was described as medium sweet to sweet, weakly to moderately sour and, in some cases, slightly bitter. The odor and aroma were of medium persistence. Predominant aroma included warm (almond, marzipan, cherry stone), floral (cherry blossom), and fruity (cherry fruit, cherry compote, processed fruits) notes.

Key words: sweet cherry honey, sensory profile, monofloral honey, characterization