PP-259 [Beekeeping Technology and Quality]

Bioactive compounds of honey from the Jaguari Valley region, Rio Grande do Sul, Brazil

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INTRODUCTION

Honey is considered a natural food, with superior quality, presenting nutritional and therapeutic properties, originating from bioactive compounds.
The Jaguari Valley, in the state of Rio Grande do Sul, is a national and international reference in the production of high-quality honey, being the third largest Brazilian producer.

OBJECTIVE

Thus, the work in question aimed to analyze sixty samples of honey from the Jaguari Valley Region, which comprises nine municipalities in the interior of the state, regarding the levels of total phenolic compounds and total flavonoids, through analysis in a spectrophotometer.

MATERIALS AND METHODS

✓ 60 samples of honey from the Jaguari Valley

✓ **Total phenolic compounds:**

- 1.0 mL of the sample diluted in water + 1.0 mL of 1N Folin Ciocalteau reagent,
- After 5 minutes, add 2.0 mL of 20% sodium carbonate solution,
- Absorbance reading performed on a spectrophotometer at 730 nm.

✓ **Total flavonoids:**

- 1.0 mL of the honey sample diluted in ethanol + 1.0 mL of the 2% aluminum chloride solution,
- After 15 minutes the absorbance reading was taken on a spectrophotometer at 420 nm.

RESULTS

Table 1 – Total phenolic compound and total flavonoid content.

Total phenolic compounds (μg EAG mL^{-1} of honey)	Total flavonoids (μg quercetin mL^{-1} of honey)	
182.6	24.7	Average ± standard deviation
814.2	74.3	minimum
518.7	43.1	maximum

EAG: gallic acid equivalente.

- The variation of these compounds can be justified due to the fact that they were passed from plants to honey, thus, each honey presents a profile due to its floral origin used by bees in the elaboration of the honey compound, indicating differences between the honeys of the nine municipalities in the region, being considered as seasonal and environmental factors.

CONCLUSIONS

Although, due to the high presence of bioactive compounds in honey, its functional potential stands out, not just as an energy product.

REFERENCES

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Honey is considered a natural food, with superior quality, presenting nutritional and therapeutic properties, originating from bioactive compounds. The Jaguari Valley, in the state of Rio Grande do Sul, is a national and international reference in the production of high-quality honey, being the third largest Brazilian producer. The Jaguari Valley Beekeeping Chain directly and indirectly benefits thousands of people, both during the production process and in the distribution, marketing and export of honey and its derivatives. Honey diversity is the result of the biodiversity of beekeeping flora, which includes native species from the Pampa Biome and the Atlantic Forest, providing pleasant sensory experiences, with flavors constructed in line with socioeconomic and cultural values and environmental conservation. Thus, the work in question aimed to analyze sixty samples of honey from the Jaguari Valley Region, which comprises nine municipalities in the interior of the state, regarding the levels of total phenolic compounds and total flavonoids, through analysis in a spectrophotometer. The total phenolic compound contents ranged from 182.6 to 814.2 µg EAG mL ^{1} of honey, for total flavonoids the variation was from 24.7 to 74.3 µg quercetin mL ^{1} of honey, representing an average of 518.7 µg EAG mL ^{1} of honey and 43.1 µg quercetin mL ^{1} of honey, respectively. The variation of these compounds can be justified due to the fact that they were passed from plants to honey, thus, each honey presents a profile due to its floral origin used by bees in the elaboration of the honey compound, indicating differences between the honeys of the nine municipalities in the region, being considered as seasonal and environmental factors. Although, due to the high presence of bioactive compounds in honey, its functional potential stands out, not just as an energy product.