

**GLU
POR** 

12.^a Reunião do Grupo de Glúcidos

Carboidratos em Portugal e potencial de diferenciação internacional

Programa e livro de resumos



Universidade de Aveiro, Portugal
11 - 13 setembro 2017

P07 - Sugar identification of *Lavandula* spp. Honey

Estevinho L.^{1,2} *Elamine Y.*³ *Miguel MG.*⁴ *Anjos O.*^{5,6}

1. Escola Superior Agrária, Instituto Politécnico de Bragança, Bragança, Portugal, 2. Centre of Molecular and Environmental Biology, University of Minho, Braga, Portugal, 3. Laboratory of Physiology-Pharmacology-Environmental Health, Faculty of Sciences Dhar El Mehraz, University Sidi Mohamed Ben Abdallah, Fez, Morocco; 4. FCT, Universidade do Algarve, Faro, Portugal; 5. Instituto Politécnico de Castelo Branco, Castelo Branco, Portugal; 6. CEF, Universidade de Lisboa, ISA, Lisboa, Portugal.

leticia@ipb.pt

Honey is mainly composed of carbohydrates (sugars), low amounts of water and a great amount of other minor components [1]. Fructose is present in a higher concentration than glucose, while about 25 different oligosaccharides have been detected in honey [2]. The honey produced with *Lavandula* spp. nectar is very appreciate by the consumers given its pleasant aroma and flavour [3].

Having into account the importance of this monofloral honey for the Portuguese and European market, the aim of this study was to characterize the sugar profile of monofloral *Lavandula* spp. honey.

The sugar content of 31 monofloral *Lavandula* spp. honey samples were analysed by High Performance Liquid Chromatography (HPLC) with refraction index (IR) detector according the methodology proposed by Bogdanov [4].

Table 1. Sugar quantification in *Lavandula* spp. honey

Analyte	N	RT (min)	LQ (g/100 g)	meant±stddev (g/100 g)	Min-Max (g/100 g)
Ramnose	3	3.83	0.17	0.17±0.04	0.11-0.23
Xylose	1	4.24	0.87	1.08	—
Arabinose	6	4.96	0.13	0.23±0.21	0.13-0.78
Fructose	31	5.46	0.77	38.31±2.66	30.62-40.86
Glucose	31	6.42	1.61	23.44±3.16	18.93-35.60
Sucrose	7	9.45	0.23	0.62±0.74	0.15-2.33
Turanose	31	10.45	0.06	1.97±0.37	1.03-2.83
Maltose	31	11.55	0.66	2.73±0.70	1.39-3.96
Melibiose	31	12.69	0.12	3.00±0.72	0.58-4.08
Trehalose	31	15.27	0.16	1.24±0.42	0.02-2.07
Melezitose	13	18.32	0.08	0.78±0.64	0.04-1.87
Erlose	6	22.60	0.16	0.20±0.08	0.13-0.36

RT- retention time; LQ- Limit of quantification; stddev- standard deviation

The results of palinological analysis reveal that the honey samples have on average 39%±14% of the *Lavandula* spp. pollen grains.

The different *Lavandula* honey sugars (fructose, glucose, sucrose, melezitose, turanose, maltose, xilose, ramnose, arabinose, melebiose, trehalose and erlose) were identified and quantified by comparison of the retention times and the peak areas of the honey sugars with those of calibration curves of standard sugars. The values expressed in g/100 g of honey are plotted in Table 1.

The *Lavandula* spp. honey is characterized by a ratio fructose/glucose of 1.6 ± 0.2 g/100 g of honey. All samples have turanose, maltose, melibiose and trehalose. The melezitose appear in 42% of the total samples analysed and other minor mono-, di- and trissacharides appear in a small number of samples.

The nectar collected from other species that are mixed with *Lavandula* spp. nectar could explain the differences found in the *Lavandula* spp. honey samples.

Acknowledgements: IPCB and IPB, for the material and equipment, Conçoção Vitorino and Cecilia Gouvêa, for the assistance with analysis

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