

CERTIFICATE OF ANALYSIS

Document No.: VLG-CoA-AR-26-HD-015882-01 Rev.: 01

SECTION 1 · PRODUCT SPECIFICATION

Product Name	Vilgain Wildflower Honey 720 g
PV Number	PV37637
Category	Seasoning & Sweeteners / Honey
Batch No.	CZ5494
Expiry Date	24.02.2029

SECTION 2 · LABORATORY TEST RESULTS

2.1 Physical and Chemical Parameters

Parameter	Unit	Result	Uncertainty	Status
Fructose	g/100 g	41.9	± 2.0	PASS
Glucose	g/100 g	39.2	± 2.0	PASS
Fructose / Glucose ratio	—	1.07	± 0.05	PASS
Glucose + Fructose	g/100 g	81.1	± 4.0	PASS
Sucrose	g/100 g	<0.5	—	PASS
Turanose	g/100 g	0.80	± 0.13	PASS
Citric acid	mg/kg	197	± 33	PASS
Ethanol	mg/kg	38	± 7	PASS
Acetic acid	mg/kg	<10	—	PASS
Lactic acid	mg/kg	33	± 8	PASS
Succinic acid	mg/kg	14	± 3	PASS
Proline	mg/kg	307	± 51	PASS
Mannose	mg/kg	<500	—	PASS
Dihydroxyacetone	mg/kg	<20	—	PASS
Humidity at 20°C	%	16.7	± 0.5	PASS
Diastase activity	Schade	9.4	± 2.5	PASS

Parameter	Unit	Result	Uncertainty	Status
Spectral fingerprint (NMR)	—	No peculiarities detected	—	PASS

2.2 Authenticity Testing — Stable Isotope Ratio Analysis (IRMS/EA-IRMS)

Parameter	Unit	Result	Uncertainty	Status
Delta C13 – Raw product (V.PDB)	‰	-25.7	± 0.3	PASS
Delta C13 (V.PDB)	‰	-25.8	± 0.3	PASS
Delta 13C – Protein (VPDB)	‰	-25.8	± 0.3	PASS
Delta 13C – Honey (VPDB)	‰	-25.7	± 0.3	PASS
Delta 13C – Fructose (VPDB)	‰	-25.56	± 0.43	PASS
Delta 13C – Glucose (VPDB)	‰	-25.72	± 0.43	PASS
Delta 13C – Disaccharides (VPDB)	‰	-26.84	± 0.62	PASS
Delta 13C – Trisaccharides (VPDB)	‰	na	—	—
Delta 13C – Oligosaccharides (VPDB)	‰	na	—	—
Delta 13C (F-G)	‰	0.16	—	PASS
Delta 13C (max.)	‰	1.28	± 0.40	PASS
Percentage of C4 sugar	%	0.60	—	PASS
% C4 sugar (AOAC 998.12)	%	1.1	—	PASS
Disaccharides rel. to total sugar content	%	5.50	—	PASS
Trisaccharides rel. to total sugar content	%	nd	—	PASS
Oligosaccharides rel. to total sugar content	%	nd	—	PASS
F/G-ratio (IRMS)	—	1.01	—	PASS

SECTION 3 · ANALYTICAL METHOD SUMMARIES

Section	Laboratory	Accreditation	Method / Standard
2.1 Physical & Chemical	Eurofins Food & Feed Testing Czech Republic s.r.o.	ILAC-MRA / L 1546	NMR – Internal Method 1, T-AA52-WO44581; Refractometry – T-AA11-WO2572; Spectrophotometry – SOP

Section	Laboratory	Accreditation	Method / Standard
			CH_12_DIAST
2.2 Authenticity (IRMS)	Eurofins Food & Feed Testing Czech Republic s.r.o.	ILAC-MRA / L 1546	EA-IRMS – Internal Method 1, T-AA02- WO2206; IRMS – ICS SOP 520-13/-14 [Apidologie 39 (2008) 574–587]

SECTION 4 · LEGISLATIVE ASSESSMENT

Overall Assessment: CONFORMING

Based on analytical report AR-26-HD-015882-01 issued by Eurofins Food & Feed Testing Czech Republic s.r.o.

The NMR profiling test did not reveal any peculiarities in this sample with reference to the Eurofins database of authentic samples.

The relation between delta 13C proteins (/PDB) and delta 13C honey (/PDB) does not indicate an addition of sugar from C4 plants (cane or maize), in accordance with AOAC official method for honey analysis (998.12).

Diastase activity is in accordance with the requirements of Decree No. 76/2003 Coll.

The sample meets the specifications of pure honey and corresponds to the legal requirements with regard to the tests performed (EU Honey Directive 2001/110/EC, article 1 and annex II, June 23rd, 2014).

Assessment criteria applied (Apidologie 39 (2008) 574–587):

Delta 13C (F-G): not higher than $\pm 1.0 \text{ ‰}$ → Result: 0.16 ‰ ✓

Delta 13C (max.): not higher than $\pm 2.1 \text{ ‰}$ → Result: 1.28 ‰ ✓

C4 sugar (calculated): $< 7 \text{ ‰}$ → Result: 0.60 ‰ ✓

Oligosaccharides: not detected (rel. amount $< 0.7\%$ of total sugar content) → Result: nd ✓

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Quality Department
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