

Eurofins Food Integrity Control Services GmbH · Berliner Straße 2 · D-27721 Ritterhude

Natural Hub
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Report date 27.05.2022

Page 1/3

Analytical report

AR-22-TH-004485-01-PTH15



Sample Code

296-2022-00004320

Sample name	KLM 02
Packaging	Squeezer
Product	Honey
Sampler	Client
Number sample tubes	1
Type of seal	Existent
Seal description	Plastic lid
Amount	approx.290 g
Reception temperature	room temperature
Reception date time	19.05.2022
Start / End of analysis	19.05.2022 / 27.05.2022

Test results

Authenticity

THH26 Method	C4/C3 Sugars in Honey (13C EA/LC-IRMS) (#) ICS SOP 520-13 (2021-03)	Result	Uncertainty	Unit
Delta 13C (Protein/VPDB)		-27.40	(± 0.43)	‰
Delta 13C (Honey/VPDB)		-27.60	(± 0.23)	‰
Delta 13C (Fructose/VPDB)		-27.71	(± 0.33)	‰
Delta 13C (Glucose/VPDB)		-27.46	(± 0.33)	‰
Delta 13C (Disaccharides/VPDB)		-27.76	(± 0.52)	‰
Delta 13C (Trisaccharides/VPDB)		-26.94	(± 0.77)	‰
Delta 13C (Oligosaccharides/VPDB)		na		‰
Delta 13C (F-G)		-0.25		‰

The customer, except those data generated during the sample registration and on-site by Eurofins, submitted all sample information. Data provided by the customer may influence the validity of results and the result interpretation.
 The analysis results and evaluation refer exclusively to the submitted samples and the scope of investigation. The measurement uncertainty does not include possible variation by sampling, if not stated otherwise.
 The norm "General requirements for the competence of testing and calibration laboratories (DIN EN ISO/IEC 17025:2018, chapter 7.8.6) requires to state the decision rule for the consideration of the expanded measurement uncertainty in the conformity assessment analysis results obtained for the tested samples. Eurofins Food Integrity Control Services GmbH considers the expanded measurement uncertainty in case the analysis results exceed a legal limit or specification value. In case the analysis results do not exceed a legal limit or specification value, the expanded measurement uncertainty is not considered. Please contact us, if you have particular requirements differing from this standard procedure in order to set up an individual procedure according to your specific needs.
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 Eurofins Food Integrity Control Services GmbH · Berliner Straße 2 · D-27721 Ritterhude
 The place of execution and jurisdiction is Walsrode - lower district court Walsrode HRB 206619.
 Managing Director: Dr. Kurt-Peter Raezke
 VAT No.: DE301552996
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Delta 13C (max.)	-0.82	‰
Percentage of C4 sugar	0.00	%
Disaccharides rel. to total sugar content	13.98	%
Trisaccharides rel. to total sugar content	3.37	%
Oligosaccharides rel. to total sugar content	nd	%
F/G-ratio	1.30	(± 0.10)

AA0SG 1H-NMR profiling of honey (sugars, HMF, sugar add)

Method Internal

Subcontracted to a Eurofins laboratory accredited for this test.

	Result	Uncertainty	Unit
Fructose	36.9	(± 2.8)	g/100 g
Glucose	27.7	(± 2.4)	g/100 g
Fructose / Glucose	1.33	(± 0.10)	
Glucose+Fructose	64.6	(± 4.2)	g/100 g
Sucrose	1.1	(± 0.6)	g/100 g
Turanose	2.87	(± 0.34)	g/100 g
5-HMF	<5		mg/kg
Mannose	<500		mg/kg
Dihydroxyacetone	<20		mg/kg
Citric acid	118	(± 21)	mg/kg
Ethanol	18	(± 5)	mg/kg
Acetic acid	85	(± 21)	mg/kg
Lactic acid	57	(± 12)	mg/kg
Succinic acid	72	(± 15)	mg/kg
Proline	325	(± 53)	mg/kg
Spectral fingerprint	typical / not adulterated		

THP01 Honey Authenticity by LC-HRMS (#)

Method ICS SOP 520-17 (2021-04), LC-Orbitrap-HRMS

	Result	Uncertainty	Unit
Exogenous sugar	not detected		

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(#) = Eurofins Food Integrity Control Services is accredited for this test.

Assessment

Exogenous sugar could not be detected. Therefore, the sample corresponds to the legal requirements with regard to the test performed (EU Honey Directive 2001/110/EC, article 1 and annex II).

Signature



Head of Laboratory / Laborleiter (Dr. Christof Kunert)

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