

Summary Report No. 106.105-2

Neutal, 20 October 2023

<b>Customer:</b>	SP LABORATORIJA A.D. - Hamilton group attn. Milorad Plackic Industrijska 3 21220 Becej Serbia		
<b>Subject:</b>	Detection of added sugar in honey		
<b>Sample received:</b>	06.10.2023	<b>Sample collected by:</b>	Customer
<b>Testing period:</b>	06.10.2023 - 20.10.2023	<b>Number of samples:</b>	2
<b>Methods:</b>	AOAC 998.12 (2015-03) 03.017 LC/EA-IRMS (2019-01) 03.001 EA-IRMS (2022-02)	<b>Analysis:</b>	$\delta^{13}\text{C}$

Dear Sir/Madam,

We are happy to report on the testing results of the samples you have sent to us.

Sample preparation was performed according to AOAC998.12 and *Elflein and Raezke* (Apidologie 39, 574-587, 2008).

**Assessment:**



✓ The tested honey sample complies with the specifications of a non-adulterated honey with C3- and C4-plant sugars, taking into account the measurement uncertainty. Based on these results, **the sample is not considered adulterated.**



✗ The tested honey sample does not comply with the specifications of a non-adulterated honey with C3- and C4-plant sugars. Based on these results, **the sample is considered adulterated.**

Internal sample no.	External description	Assessment
106.105/005	Honey, V23-70; V23090005 , KRNJEVAC CVETNI MED 250g	✓
106.105/006	Honey, V23-70; V23090006 , MOJ DOMA?I MED-500g CVETNI MED	✓

Please find further details on the results in the annexed accredited testing report no. 106.105-2.

**Contact person:** Dr. David Psomiadis  
**Head of testing:** Dr. David Psomiadis  
**Assigned Analyst:** Dr. Balázs Horváth  
**Enclosure:** Testing report no. 106.105-2

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**Samples:**

Internal sample no.	External description	Sample volume
106.105/005	Honey, V23-70; V23090005 , KRNJEVAC CVETNI MED 250g	ca 40ml
106.105/006	Honey, V23-70; V23090006 , MOJ DOMA?I MED-500g CVETNI MED	ca 40ml

**Results\*:**

Internal sample No.	Honey $\delta^{13}\text{C}_{\text{VPDB}}$ [‰]	Protein $\delta^{13}\text{C}_{\text{VPDB}}$ [‰]	C4-sugar content [%]
106.105/005	-25,5	-25,2	0,0
106.105/006	-25,2	-25,0	0,0

Internal sample No.	Fructose $\delta^{13}\text{C}_{\text{VPDB}}$ [‰]	Glucose $\delta^{13}\text{C}_{\text{VPDB}}$ [‰]	Disaccharides $\delta^{13}\text{C}_{\text{VPDB}}$ [‰]	Trisaccharides $\delta^{13}\text{C}_{\text{VPDB}}$ [‰]	F-G $\delta^{13}\text{C}_{\text{VPDB}}$ [‰]	max $\Delta \delta^{13}\text{C}_{\text{VPDB}}$ [‰]
106.105/005	-24,6	-25,9	-25,9	-25,8 <sup>1</sup>	1,3	1,3
106.105/006	-24,4	-25,4	-25,4	-25,0 <sup>1</sup>	1,0	1,0

<sup>1</sup> compound accreditation pending

\*The reported stable isotope ratios represent the mean value of the sample's replicate analysis (n≥2), accepted when the standard deviation of the sample's replicate analysis per stable isotope ratio is:

$\delta^{13}\text{C}_{\text{VPDB}}$
≤0,4

Specifications for non-adulterated honey:

C4-sugar content &lt; 7%

 F-G ( $\delta^{13}\text{C}$ ) ≤ 1‰

 max  $\Delta \delta^{13}\text{C}$  ≤ 2,1‰

C4-sugar LOD: 1%

C3-sugar LOD: 10%



Sample 106.105/005



Sample 106.105/006

**Contact person:** Dr. David Psomiadis  
**Head of testing:** Dr. David Psomiadis  
**Assigned Analyst:** Dr. Balázs Horváth

Test results relate to the test objects described above only. Any duplication or disclosure is subject to approval of Imprint Analytics GmbH. Details to the accredited test methods: [www.imprint-analytics.at/en/accreditation](http://www.imprint-analytics.at/en/accreditation). General Terms and Conditions of Imprint Analytics GmbH apply in current version.