

Test Report No. 210-1391689

QSI GmbH - Flughafendamm 9a - D-28199 Bremen

Smitty Bee Honey Inc.

208 Main Avenue
51527 Defiance, IA
UNITED STATES OF AMERICA

Date: 02-Oct-2024

Customer No.:	11767	Sample No.:	566149
Product:	Honig/Honey		
Label: loway C			
Arrival Date:	23-Sep-2024	Start / End of Analysis:	23-Sep-2024 / 02-Oct-2024
Kind/Origin:	Iowa	Packaging:	Kunststoff / plastic
Seal:	ohne/without	Temp.:	RT

VA88760 (2023-08) Pesticide Residues, GC/MS/MS, LC/MS/MS-Screening, Honey

Parameter in mg/kg	LOQ*	Result
Amitraz sum	0,01	0,0237 (MRL: 0,2)

Subcontracting of test not accredited at QSI to laboratory within the Tentamus Group accredited for this test , Laboratorio Analitico Bioclinico S.L.U.

* LOQ = limit of quantitation, n.n. = below LOQ (according to attached parameter list)

MRL = Maximum residue limit acc. to Regulation (EC) No 396/2005

combined procedure from the methods DFG S19 and QuEChERS, also according to AOAC method 2007.01

The expanded relative measurement uncertainty is 50% (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

In the scope of the analysis carried out, the sample complies with the requirements of Regulation (EC) No 396/2005 as amended.

Quality Services International GmbH

Version 0


Jürgen Wehlitz
Test Manager
Food Chemist



This examination is the basis for special decision guidance.

The test results are exclusively related to the items tested for this sample in the above mentioned time frame for analysis. Method and measurement uncertainty details are available upon request. This report is allowed to be copied completely and unchanged but not in extracts. Furthermore, as well as for statements regarding conformity our General Terms and Conditions of Business are applicable.

Test Report No.: 210-1391689 Version 0

Page: 2 of 2

Quality Services
International GmbH
Flughafendamm 9a
D-28199 Bremen

Tel. +49 421 596607-0
e-mail:
info.qsi@tentamus.com
GTC see homepage
www.qsi.de

Amtsgericht Bremen
HRB 18842
Managing Director:
Dr. Cord Lüllmann

Hypo Vereinsbank
IBAN: DE70 1002 0890 0036 3495 49
BIC: HYVE DE MM488
USI-ID: DE 202142221

Test Report No. 210-1391690

QSI GmbH - Flughafendamm 9a - D-28199 Bremen

Smitty Bee Honey Inc.

208 Main Avenue
51527 Defiance, IA
UNITED STATES OF AMERICA

Date: 01-Oct-2024

Customer No.:	11767	Sample No.:	566148
Product:	Honig/Honey		
Label: loway B			
Arrival Date:	23-Sep-2024	Start / End of Analysis:	23-Sep-2024 / 01-Oct-2024
Kind/Origin:	Iowa	Packaging:	Kunststoff / plastic
Seal:	ohne/without	Temp.:	RT

VA40262 (2022-09) Authenticity, isotope analysis, 13C-EA-IRMS (AOAC 998.12, mod.^) + 13C-LC-IRMS (C4/C3-sugar)*, Honey**

Parameter	Method	Unit	Target Value****	Result
Protein (P)	AOAC 998.12	d-13C‰		-26,37
Honey (H)	AOAC 998.12	d-13C‰		-26,81
Fructose (F)	LC-IRMS	d-13C‰		-27,04
Glucose (G)	LC-IRMS	d-13C‰		-26,90
Disaccharides	LC-IRMS	d-13C‰		-26,77
Relative Percentage of Disaccharides*	LC-IRMS	%		8,19
Trisaccharide	LC-IRMS	d-13C‰		-25,65
Relative Percentage of Trisaccharides*	LC-IRMS	%		1,38
Oligosaccharides	LC-IRMS	d-13C‰		n.b.
Relative Percentage of Oligosaccharides*	LC-IRMS	%		n.n.
F/G ratio	LC-IRMS			1,16
Difference d-13C Fructose-Glucose (F-G)	LC-IRMS	d-13C‰	- 1 to + 1	-0,14
Difference d-13C (max.) all sugar fractions	LC-IRMS	d-13C‰	<= 2,50	1,39
Difference Protein-Honey (P-H)	AOAC 998.12	d-13C‰		+0,44
C4-sugar-content**	AOAC 998.12	%	<= 7,00	0,00

Accredited method

n.b.: not determinable n.n.: not detectable ($\leq 1\%$ (relative) related to all sugar fractions LC-IRMS); LC-IRMS is not an official method for F/G ratio

* related to all sugar fractions LC-IRMS; ** related to average d13C value of corn syrup of -9.7% vs. V-PDB Standard

*** Apidologie for LC-IRMS (2008, Volume 39, Issue 5, pp 574-587); **** QSI-criterion authentic honey: all target values passed

^ Weighing, sample preparation, determination of carbon isotopes, for honey and protein

The expanded relative measurement uncertainty is 3% (coverage factor $k=2.58$; confidence interval 99%) without taking the sampling into account.

Conclusion:

The values determined in the course of the investigation carried out correspond to the QSI criteria for authentic honey and, in our opinion and according to current scientific knowledge, do not indicate the addition of foreign sugars. With regard to the investigated parameters the honey corresponds to the legal regulations (EU Honey directive 2001/110/EC, Annex 2 Part 1).

Quality Services International GmbH

Version 0



Jürgen Wehlitz
Test Manager
Food Chemist

This examination is the basis for special decision guidance.

The test results are exclusively related to the items tested for this sample in the above mentioned time frame for analysis. Method and measurement uncertainty details are available upon request. This report is allowed to be copied completely and unchanged but not in extracts. Furthermore, as well as for statements regarding conformity our General Terms and Conditions of Business are applicable.

Test Report No.: 210-1391690 Version 0

Page: 2 of 2

Quality Services
International GmbH
Flughafendamm 9a
D-28199 Bremen

Tel. +49 421 596807-0
e-mail:
info.qsi@tentamus.com
GTC see homepage

Amtsgericht Bremen
HRB 18842
Managing Director:
Dr. Cord Lüllmann

Hypo Vereinsbank
IBAN: DE70 1002 0890 0036 3495 49
BIC: HYVE DE MM488
USI-ID: DE 202142221



Test Report No. 210-1391686

QSI GmbH - Flughafendamm 9a - D-28199 Bremen

Smitty Bee Honey Inc.

208 Main Avenue
51527 Defiance, IA
UNITED STATES OF AMERICA

Date: 02-Oct-2024

Customer No.:	11767	Sample No.:	566147
Product:	Honig/Honey		
Label: loway A			
Arrival Date:	23-Sep-2024	Start / End of Analysis:	23-Sep-2024 / 02-Oct-2024
Kind/Origin:	Iowa	Packaging:	Kunststoff / plastic
Seal:	ohne/without	Temp.:	RT

VA88760 (2023-08) Pesticide Residues, GC/MS/MS, LC/MS/MS-Screening, Honey

Parameter in mg/kg	LOQ*	Result
Amitraz sum	0,01	0,0175 (MRL: 0,2)

Subcontracting of test not accredited at QSI to laboratory within the Tentamus Group accredited for this test, Laboratorio Analítico Bioclínico S.L.U.

* LOQ = limit of quantitation, n.n. = below LOQ (according to attached parameter list)

MRL = Maximum residue limit acc. to Regulation (EC) No 396/2005

combined procedure from the methods DFG S19 and QuEChERS, also according to AOAC method 2007.01

The expanded relative measurement uncertainty is 50% (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

In the scope of the analysis carried out, the sample complies with the requirements of Regulation (EC) No 396/2005 as amended.

Quality Services International GmbH

Version 0


Jürgen Wehlitz
Test Manager
Food Chemist



This examination is the basis for special decision guidance.

The test results are exclusively related to the items tested for this sample in the above mentioned time frame for analysis. Method and measurement uncertainty details are available upon request. This report is allowed to be copied completely and unchanged but not in extracts. Furthermore, as well as for statements regarding conformity our General Terms and Conditions of Business are applicable.

Test Report No.: 210-1391686 Version 0

Page: 2 of 2

Quality Services
International GmbH
Flughafendamm 9a
D-28199 Bremen

Tel. +49 421 596607-0
e-mail:
info.qsi@tentamus.com
GTC see homepage
www.qsi.de

Amtsgericht Bremen
HRB 18842
Managing Director:
Dr. Cord Lüllmann

Hypo Vereinsbank
IBAN: DE70 1002 0890 0036 3495 49
BIC: HYVE DE MM488
USI-ID: DE 202142221

Test Report No. 210-1391687

QSI GmbH - Flughafendamm 9a - D-28199 Bremen
 Smitty Bee Honey Inc.

208 Main Avenue
 51527 Defiance, IA
 UNITED STATES OF AMERICA

Date: 30-Sep-2024

Customer No.:	11767	Sample No.:	566149
Product:	Honig/Honey		
Label: loway C			
Arrival Date:	23-Sep-2024	Start / End of Analysis:	23-Sep-2024 / 30-Sep-2024
Kind/Origin:	Iowa	Packaging:	Kunststoff / plastic
Seal:	ohne/without	Temp.:	RT

VA40262 (2022-09) Authenticity, Isotope analysis, 13C-EA-IRMS (AOAC 998.12, mod.^) + 13C-LC-IRMS (C4/C3-sugar)*, Honey**

Parameter	Method	Unit	Target Value****	Result
Protein (P)	AOAC 998.12	d-13C‰		-26,24
Honey (H)	AOAC 998.12	d-13C‰		-26,47
Fructose (F)	LC-IRMS	d-13C‰		-26,56
Glucose (G)	LC-IRMS	d-13C‰		-26,51
Disaccharides	LC-IRMS	d-13C‰		-26,33
Relative Percentage of Disaccharides*	LC-IRMS	%		8,14
Trisaccharide	LC-IRMS	d-13C‰		-25,40
Relative Percentage of Trisaccharides*	LC-IRMS	%		1,41
Oligosaccharides	LC-IRMS	d-13C‰		n.b.
Relative Percentage of Oligosaccharides*	LC-IRMS	%		n.n.
F/G ratio	LC-IRMS			1,16
Difference d-13C Fructose-Glucose (F-G)	LC-IRMS	d-13C‰	- 1 to + 1	-0,05
Difference d-13C (max.) all sugar fractions	LC-IRMS	d-13C‰	<= 2,50	1,16
Difference Protein-Honey (P-H)	AOAC 998.12	d-13C‰		+0,23
C4-sugar-content**	AOAC 998.12	%	<= 7,00	0,00

Accredited method

n.b.: not determinable n.n.: not detectable ($\leq 1\%$ (relative) related to all sugar fractions LC-IRMS); LC-IRMS is not an official method for F/G ratio

* related to all sugar fractions LC-IRMS; ** related to average d13C value of corn syrup of -9.7% vs. V-PDB Standard

*** Apidologie for LC-IRMS (2008, Volume 39, Issue 5, pp 574-587); **** QSI-criterion authentic honey: all target values passed

^ Weighing, sample preparation, determination of carbon isotopes, for honey and protein

The expanded relative measurement uncertainty is 3 % (coverage factor $k=2.58$; confidence interval 99 %) without taking the sampling into account.

Conclusion:

The values determined in the course of the investigation carried out correspond to the QSI criteria for authentic honey and, in our opinion and according to current scientific knowledge, do not indicate the addition of foreign sugars. With regard to the investigated parameters the honey corresponds to the legal regulations (EU Honey directive 2001/110/EC, Annex 2 Part 1).

Quality Services International GmbH

Version 0

A. Rehle
Anna Rehle
Test Manager
Food Chemist



This examination is the basis for special decision guidance.

The test results are exclusively related to the items tested for this sample in the above mentioned time frame for analysis. Method and measurement uncertainty details are available upon request. This report is allowed to be copied completely and unchanged but not in extracts. Furthermore, as well as for statements regarding conformity our General Terms and Conditions of Business are applicable.

Test Report No.: 210-1391687 Version 0

Page: 2 of 2

Quality Services
International GmbH
Flughafendamm 9a
D-28199 Bremen

Tel. +49 421 596607-0
e-mail:
info.qsi@tentamus.com
GTC see homepage

Amtsgericht Bremen
HRB 18842
Managing Director:
Dr. Cord Lüllmann

Hypo Vereinsbank
IBAN: DE70 1002 0890 0036 3495 49
BIC: HYVE DE MM488
USI-ID: DE 202142221



Test Report No. 210-1391684

QSI GmbH - Flughafendamm 9a - D-28199 Bremen
 Smitty Bee Honey Inc.

208 Main Avenue
 51527 Defiance, IA
 UNITED STATES OF AMERICA

Date: 30-Sep-2024

Customer No.:	11767	Sample No.:	566147
Product:	Honig/Honey		
Label: loway A			
Arrival Date:	23-Sep-2024	Start / End of Analysis:	23-Sep-2024 / 30-Sep-2024
Kind/Origin:	Iowa	Packaging:	Kunststoff / plastic
Seal:	ohne/without	Temp.:	RT

VA40262 (2022-09) Authenticity, Isotope analysis, 13C-EA-IRMS (AOAC 998.12, mod.^) + 13C-LC-IRMS (C4/C3-sugar)*, Honey**

Parameter	Method	Unit	Target Value****	Result
Protein (P)	AOAC 998.12	d-13C‰		-27,67
Honey (H)	AOAC 998.12	d-13C‰		-27,93
Fructose (F)	LC-IRMS	d-13C‰		-28,13
Glucose (G)	LC-IRMS	d-13C‰		-28,23
Disaccharides	LC-IRMS	d-13C‰		-26,66
Relative Percentage of Disaccharides*	LC-IRMS	%		8,43
Trisaccharide	LC-IRMS	d-13C‰		-26,79
Relative Percentage of Trisaccharides*	LC-IRMS	%		2,19
Oligosaccharides	LC-IRMS	d-13C‰		n.b.
Relative Percentage of Oligosaccharides*	LC-IRMS	%		n.n.
F/G ratio	LC-IRMS			1,24
Difference d-13C Fructose-Glucose (F-G)	LC-IRMS	d-13C‰	- 1 to + 1	+0,10
Difference d-13C (max.) all sugar fractions	LC-IRMS	d-13C‰	<= 2,50	1,57
Difference Protein-Honey (P-H)	AOAC 998.12	d-13C‰		+0,26
C4-sugar-content**	AOAC 998.12	%	<= 7,00	0,00

Accredited method

n.b.: not determinable n.n.: not detectable ($\leq 1\%$ (relative) related to all sugar fractions LC-IRMS); LC-IRMS is not an official method for F/G ratio

* related to all sugar fractions LC-IRMS; ** related to average d13C value of corn syrup of -9.7% vs. V-PDB Standard

*** Apidologie for LC-IRMS (2008, Volume 39, Issue 5, pp 574-587); **** QSI-criterion authentic honey: all target values passed

^ Weighing, sample preparation, determination of carbon isotopes, for honey and protein

The expanded relative measurement uncertainty is 3% (coverage factor $k=2.58$; confidence interval 99%) without taking the sampling into account.

Conclusion:

The values determined in the course of the investigation carried out correspond to the QSI criteria for authentic honey and, in our opinion and according to current scientific knowledge, do not indicate the addition of foreign sugars. With regard to the investigated parameters the honey corresponds to the legal regulations (EU Honey directive 2001/110/EC, Annex 2 Part 1).

Quality Services International GmbH

Version 0

A. Rehle
Anna Rehle
Test Manager
Food Chemist



This examination is the basis for special decision guidance.

The test results are exclusively related to the items tested for this sample in the above mentioned time frame for analysis. Method and measurement uncertainty details are available upon request. This report is allowed to be copied completely and unchanged but not in extracts. Furthermore, as well as for statements regarding conformity our General Terms and Conditions of Business are applicable.

Test Report No.: 210-1391684 Version 0

Page: 2 of 2

Quality Services
International GmbH
Flughafendamm 9a
D-28199 Bremen

Tel. +49 421 596607-0
e-mail:
info.qsi@tentamus.com
GTC see homepage

Amtsgericht Bremen
HRB 18842
Managing Director:
Dr. Cord Lüllmann

Hypo Vereinsbank
IBAN: DE70 1002 0890 0036 3495 49
BIC: HYVE DE MM488
USI-ID: DE 202142221

