

Test Report No. 210-1024891

QSI GmbH - Flughafendamm 9a - D-28199 Bremen

Medino d.o.o. Krnjevo
 Ivan Grujic
 Bulevar Oslobođenja 29
 11319 Krnjevo
 SERBIA

Date: 27-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 27-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

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‰		-25,31
Honey (H)	AOAC 998.12	d-13C‰		-25,46
Fructose (F)	LC-IRMS	d-13C‰		-25,88
Glucose (G)	LC-IRMS	d-13C‰		-26,07
Disaccharides	LC-IRMS	d-13C‰		-26,64
Relative Percentage of Disaccharides*	LC-IRMS	%		4,57
Trisaccharide	LC-IRMS	d-13C‰		n.b.
Relative Percentage of Trisaccharides*	LC-IRMS	%		n.n.
Oligosaccharides	LC-IRMS	d-13C‰		n.b.
Relative Percentage of Oligosaccharides*	LC-IRMS	%		n.n.
F/G ratio	LC-IRMS			1,10
Difference d-13C Fructose-Glucose (F-G)	LC-IRMS	d-13C‰	- 1 to + 1	+0,19
Difference d-13C (max.) all sugar fractions	LC-IRMS	d-13C‰	<= 2,50	0,76
Difference Protein-Honey (P-H)	AOAC 998.12	d-13C‰		+0,15
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


Markus Krieger
Test Manager
Food Chemist



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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.

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Test Report No. 210-1024898

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Medino d.o.o. Krnjevo
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Bulevar Oslobođenja 29
11319 Krnjevo
SERBIA

Date: 25-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 25-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA86214 (2022-01) Chloramphenicol (CAP), LC-MS/MS, Honey (LOQ 0,1 ppb)

Parameter in µg/kg	MRL**	LOQ*	Result
Chloramphenicol		0,1	n.n.

Accredited method

* LOQ = limit of quantitation; n.n. = below LOQ MRPL (2003/181/EG) = 0,3 µg/kg

** Prohibited substance acc. to EU Regulation 37/2010 Annex Table 2

The expanded relative measurement uncertainty is 40 % (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

Under consideration of above indicated limit of quantitation this result complies with EU Regulation 37/2010 (residues of pharmacologically active substances in foodstuffs of animal origin).

Quality Services International GmbH

Version 0




Jürgen Wehlitz
Test Manager
Food Chemist

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Test Report No. 210-1024895

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Medino d.o.o. Krnjevo
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Bulevar Oslobođenja 29
11319 Krnjevo
SERBIA

Date: 24-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 24-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA45275 (2018-03) Antibiotics, Macrolides and Fluoroquinolones (31 substances, LOQ 2 ppb ^), Honey

Parameter in µg/kg	MRL**	LOQ*	Result
>>>Macrolide Antibiotics			
Clindamycin		2	n.n.
Sum Erythromycin A***		2	n.n.
Josamycin		2	n.n.
Kitasamycin		2	n.n.
Lincomycin		2	n.n.
Oleandomycin		2	n.n.
Spiramycin		2	n.n.
Mirosamycin		2	n.n.
Tilmicosin		2	n.n.
Tylosin A		2	n.n.
Tylosin B		2	n.n.
>>>Fluoroquinolone Antibiotics			
Enrofloxacin		2	n.n.
Sarafloxacin		2	n.n.
Flumequine		2	n.n.
Difloxacin		2	n.n.
Ciprofloxacin		2	n.n.
Ofloxacin		2	n.n.
Oxolinic acid		2	n.n.
Sparfloxacin		2	n.n.
Danofloxacin		2	n.n.
Fleroxacin		2	n.n.
Norfloxacin		2	n.n.

Enoxacin	2	n.n.
Marbofloxacin	2	n.n.
Nalidixic acid	2	n.n.
Cinoxacin	2	n.n.
Lomefloxacin	2	n.n.
Nadifloxacin	2	n.n.
Orbifloxacin	2	n.n.
Pazufloxacin	2	n.n.
Pefloxacin	2	n.n.
Pipemidic acid	2	n.n.

Accredited method

* LOQ = limit of quantitation, n.n. = below LOQ

** no legal limit (MRL) acc. to 470/2009/EC + 37/2010/EU: no permit for use of antibiotics in beekeeping

*** contains Erythromycin A and Anhydroerythromycin A

^ Equivalent to FDA method fluoroquinole residues in honey, dated September 29, 2006

The expanded relative measurement uncertainty is 40 % (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

Under consideration of above indicated limit of quantitation this result complies with EU Regulation 37/2010 (residues of pharmacologically active substances in foodstuffs of animal origin).

Quality Services International GmbH

Version 0

M. Krieger
 Markus Krieger
 Test Manager
 Food Chemist



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Test Report No. 210-1024897

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Medino d.o.o. Krnjevo
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Bulevar Oslobođenja 29
11319 Krnjevo
SERBIA

Date: 25-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 25-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA45301 (2022-01) Antibiotics, Nitrofurantoin Metabolites, LC-MS/MS (LOQ 0,5 ppb), Honey

Parameter in µg/kg	MRL**	LOQ*	Result
Semicarbazide (from Nitrofurazone)		0,5	n.n.
AOZ (from Furazolidone)		0,5	n.n.
AHD (from Nitrofurantoin)		0,5	n.n.
AMOX (from Furaltadon)		0,5	n.n.

Accredited method

* LOQ = limit of quantitation; n.n. = below LOQ; MRPL (Minimum required performance limit according to 2003/181/EG) = 1 µg/kg

** Prohibited substance acc. EU-Regulation 37/2010 Annex Table 2

The expanded relative measurement uncertainty is 40 % (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

Under consideration of above indicated limit of quantitation this result complies with EU Regulation 37/2010 (residues of pharmacologically active substances in foodstuffs of animal origin).



Jürgen Wehlitz
Test Manager
Food Chemist

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11319 Krnjevo
SERBIA

Date: 24-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 24-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA45282 (2021-11) Antibiotics, Nitroimidazoles, LC-MS/MS (LOQ 0,5), Honey

Parameter in µg/kg	MRL	LOQ*	Result
Metronidazole	***	0,5	n.n.
Dimetridazole	***	0,5	n.n.
Ronidazole	***	0,5	n.n.
Ipronidazole	**	0,5	n.n.
Ornidazole	**	0,5	n.n.
Tinidazole	**	0,5	n.n.

Accredited method

* LOQ = limit of quantitation, n.n. = below LOQ

** no legal limit (MRL) acc. to 470/2009/EC + 37/2010/EU: no permit for use of antibiotics in beekeeping

*** prohibited substance acc. EU-Regulation 37/2010 Annex Table 2

The expanded relative measurement uncertainty is 40 % (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

Under consideration of above indicated limit of quantitation this result complies with EU Regulation 37/2010 (residues of pharmacologically active substances in foodstuffs of animal origin).


Markus Krieger
Test Manager
Food Chemist



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Test Report No. 210-1024900

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Medino d.o.o. Krnjevo
 Ivan Grujic
 Bulevar Oslobođenja 29
 11319 Krnjevo
 SERBIA

Date: 26-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 26-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA88560 (2021-10) Pesticide Residues, GC/MS/MS, LC/MS/MS-Screening (> 700 substances)*, Honey

Parameter in mg/kg	Result
Pesticides, GC	n.n.
Pesticides, LC	Amitraz (amitraz including the metabolites containing the 2,4 -dimethylaniline moiety expressed as amitraz): n.n. (LOQ: 0,010; MRL: 0,20)

Subcontracting of test not accredited at QSI to laboratory within the Tentamus Group accredited for this test , bilacon GmbH

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

MRL = Maximum residue limit

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:

With respect to our examination program the sample complies with current EC Regulation 396/2005.

Quality Services International GmbH

Version 0



Isabel Tipke
Test Manager
Food Chemist

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Test Report No. 210-1024893

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 Bulevar Oslobođenja 29
 11319 Krnjevo
 SERBIA

Date: 24-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 24-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA45228 (2018-01) Antibiotics, Streptomycins, LC-MS/MS, Honey (LOQ 2 ppb)

Parameter in µg/kg	MRL**	LOQ*	Result
Streptomycin		2	n.n.
Dihydrostreptomycin		2	n.n.

Accredited method

* LOQ = limit of quantitation; n.n. = below LOQ

** no legal limit (MRL) acc. to 470/2009/EC + 37/2010/EU: no permit for use of antibiotics in beekeeping

The expanded relative measurement uncertainty is 40 % (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

Under consideration of above indicated limit of quantitation this result complies with EU Regulation 37/2010 (residues of pharmacologically active substances in foodstuffs of animal origin).


Markus Krieger
Test Manager
Food Chemist



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11319 Krnjevo
SERBIA

Date: 24-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 24-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA45236 (2010-08) Antibiotics, Sulfonamides and Trimethoprim, LC-MS/MS (LOQ 2ppb), Honey

Parameter in µg/kg	MRL**	LOQ*	Result
Sulfadimethoxine		2	n.n.
Sulfaquinoxaline		2	n.n.
Sulfamethizole		2	n.n.
Sulfachlorpyridazine		2	n.n.
Sulfamoxole		2	n.n.
Sulfadoxine		2	n.n.
Sulfasalazine		2	n.n.
Sulfabenzamide		2	n.n.
Sulfaguanidine		2	n.n.
Sulfanilamide		2	n.n.
Sulfacetamide		2	n.n.
Sulfadiazine		2	n.n.
Sulfathiazole		2	n.n.
Sulfapyridine		2	n.n.
Sulfamerazine		2	n.n.
Sulfamer		2	n.n.
Sulfadimidine (= Sulfamethazine)		2	n.n.
Sulfamethoxypyridazine		2	n.n.
Sulfamethoxazole		2	n.n.
Trimethoprim		2	n.n.
Sulfamonomethoxine		2	n.n.
Sulfaclozine		2	n.n.
Sulfisoxazole		2	n.n.
Succinylsulfathiazole		2	n.n.

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Sulfaphenazole	2	n.n.
Sulfisozole	2	n.n.
Sulfisomidine	2	n.n.
Sulfaethoxyridazine	2	n.n.
Sulfanitran	2	n.n.
Ormetoprim	2	n.n.

Accredited method

* LOQ = limit of quantitation; n.n. = below LOQ

**no legal limit (MRL) acc. to 470/2009/EC + 37/2010/EU: no permit for use of antibiotics in beekeeping

The expanded relative measurement uncertainty is 40 % (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

Under consideration of above indicated limit of quantitation this result complies with EU Regulation 37/2010 (residues of pharmacologically active substances in foodstuffs of animal origin).

Quality Services International GmbH

Version 0


 Markus Krieger
 Test Manager
 Food Chemist



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11319 Krnjevo
SERBIA

Date: 24-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 24-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA45204 (2016-02) Antibiotics, Tetracyclines, LC-MS/MS (LOQ 2 ppb), Honey

Parameter in µg/kg	MRL**	LOQ*	Result
Oxytetracycline***		2	n.n.
Tetracycline***		2	n.n.
Chlortetracycline***		2	n.n.
Doxycycline		2	n.n.
Demeclocycline		2	n.n.
Methacycline		2	n.n.
Minocycline		2	n.n.

Accredited method

* LOQ = limit of quantitation; n.n. = below LOQ

**no legal limit (MRL) acc. to 470/2009/EC + 37/2010/EU: no permit for use of antibiotics in beekeeping

*** Sum of parent drug and its 4-epimer

The expanded relative measurement uncertainty is 40% (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

Under consideration of above indicated limit of quantitation this result complies with EU Regulation 37/2010 (residues of pharmacologically active substances in foodstuffs of animal origin).


Markus Krieger
Test Manager
Food Chemist



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Bulevar Oslobođenja 29
11319 Krnjevo
SERBIA

Date: 21-Oct-2022

Customer No.:	11802	Sample No.:	435992
Product:	Honig/Honey		
Label: 020922			
Arrival Date:	20-Oct-2022	Start / End of Analysis:	20-Oct-2022 / 21-Oct-2022
Kind/Origin:	Serbia Polyflora	Packaging:	Glas / glass
Seal:	ohne/without	Temp.:	

VA161 (2019-07) Tradeanalysis: Moisture, HMF, Diastase, pH, Acidity, Honey-Directive

Parameter	Method	Unit	Result
Moisture	ASU L40.00-2/1, 2019-07	%	17,9
HMF (Hydroxymethylfurfural)	ASU L 40.00-10/1, 2021-11	mg/kg	9,4
Diastase activity	ASU L 40.00-1, 2019-07 mod.^	DN Schade	22,2
pH-value	ASU L 40.00-6, 2011-06		4,0
Acidity*	ASU L 40.00-6, 2011-06	meq/kg	18,5
Accordance with EC Honey Directive			Honig/honey

Accredited method

* if acidity is < 17 (or < 10 in specific honey types), proline content will be determined automatically

^Weighing and amount of buffer; adaptation to Random Access Analyzer

The expanded relative measurement uncertainty is 0.8 % (Moisture); 9 % (HMF); 12 % (Diastase); 0.5 % (pH-value); 10 % (acidity) (coverage factor k=2.58; confidence interval 99 %) without taking the sampling into account.

Conclusion:

The determined values are in accordance with the requirements of Council Directive 2001/110/EC Annex II of 20. December 2001 relating to Honig/honey.



Isabel Tipke
Test Manager
Food Chemist

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