

Client:



21806130221  
PA244803

**MR. POLBEE Sp. z o.o.**  
**woj. Mazowieckie**  
**ul. Brukowa 3, Kamien**  
**26800 Bialobrzegi**  
**Poland**

<b>Our reference no.</b>	: <b>PI1806080386</b>		
<b>Product</b>	: Honey		
<b>Sample description / Batch</b>	: <b>Lot N° 7-2018 contract 17/PL from 12.09.2017</b>		
<b>Sample received on / transported by</b>	: 08.06.2018 via Parcel service	<b>Seal</b>	: none
<b>Sample temp. when received / stored</b>	: RT	<b>Sampling</b>	: Client
<b>Packaging / Quantity</b>	: Plastic container / ca. 500g	<b>Start / End of analysis</b>	: 11.06.2018 / 13.06.2018

**ANALYSIS REQUESTED: Chloramphenicol by LC-MS/MS (101024)**

Parameter	Result	Unit	Method
Chloramphenicol	n.d.	µg/kg	PM DE01_022 (a) <sup>1</sup>
n.d. - not detected < limit of quantification 0.1 µg/kg MRPL (Minimum Required Performance limit) for chloramphenicol = 0.3 µg/kg according to 2003/181/EG dated March 13, 2003			
(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) Inhouse procedure This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

**Interpretation:**

Regarding the examined parameter and with respect to the mentioned limit of quantification and the MRPL of 0.3 µg/kg the sample corresponds to the legal regulations (Regulation (EC) 470/2009 in conjunction with Regulation (EU) 37/2010 (dated Feb. 9th 2010)) and corresponds to the Decision 2003/181/EC dated March 13th, 2003 in connection with the Decision 2005/34/EC dated Jan. 11th, 2005.

Hauke Zinow  
Responsible Scientist, Certified Food Chemist

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Sample received on / transported by	: 08.06.2018 via Parcel service	Seal	: none
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Packaging / Quantity	: Plastic container / ca. 500g	Start / End of analysis	: 11.06.2018 / 13.06.2018

**ANALYSIS REQUESTED: Nitrofurane Metabolites by LC-MS/MS (101027)**

Parameter	Result	Unit	Method
AOZ	n.d.	µg/kg	PM DE01_031 (a) <sup>1</sup>
AMAZ	n.d.	µg/kg	PM DE01_031 (a) <sup>1</sup>
AHD	n.d.	µg/kg	PM DE01_031 (a) <sup>1</sup>
SEM	n.d.	µg/kg	PM DE01_031 (a) <sup>1</sup>
n.d. - not detected < 0.2 µg/kg (AOZ, AMAZ), < 0.5 µg/kg (AHD, SEM) MRPL (Minimum Required Performance Limit) for nitrofurane metabolites = 1.0 µg/kg according to 2003/181/EG from March, 13, 2003			
(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) Inhouse procedure This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

**Interpretation:**

Regarding the examined parameters, the mentioned limit of detection and the MRPL of 1 µg/kg the sample corresponds to the legal regulations (Regulation (EC) 470/2009 in conjunction with Regulation (EU) 37/2010 (dated Feb. 9th 2010)) and corresponds to the Decision 2003/181/EC dated March 13th, 2003 in connection with the Decision 2005/34/EC dated Jan. 11th, 2005.

**Dr. Hartmut Wischmann**  
*Responsible Scientist, Certified Food Chemist*

Client:



21806140417  
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**26800 Bialobrzegi**  
**Poland**

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<b>Our reference no.</b>	: <b>PI1806080386</b>		
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Sample received on / transported by	: 08.06.2018 via Parcel service	Seal	: none
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Packaging / Quantity	: Plastic container / ca. 500g	Start / End of analysis	: 12.06.2018 / 14.06.2018

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**ANALYSIS REQUESTED: Metronidazole by LC-MS/MS (101089)**

Parameter	Result	Unit	Method
Metronidazole	n.d.	µg/kg	PM DE01_101 (a) <sup>1</sup>
n.d. - not detected < 0.5 µg/kg limit of quantification			
(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) Inhouse procedure This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

**Interpretation:**

Regarding the examined parameters and with respect to the mentioned limit of quantification the sample corresponds to the legal regulations (Regulation (EC) 470/2009 in conjunction with regulation (EU) 37/2010 (dated Feb. 9th 2010)).

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**ANALYSIS REQUESTED: 13C Isotope Analysis by EA/LC (C4/C3-Sugars) (101158)**

Parameter	Result	Unit	Method
Protein	-25.72	d13C(‰)	PM DE01_026 (a) <sup>1</sup>
Honey	-26.35	d13C(‰)	PM DE01_026 (a) <sup>1</sup>
Fructose (F)	-26.41	d13C(‰)	PM DE01_094 (a) <sup>2</sup>
Glucose (G)	-26.89	d13C(‰)	PM DE01_094 (a) <sup>2</sup>
Disaccharides	-26.38	d13C(‰)	PM DE01_094 (a) <sup>2</sup>
Trisaccharides	n.a.	d13C(‰)	PM DE01_094 (a) <sup>2</sup>
Oligosaccharides	n.a.	d13C(‰)	PM DE01_094 (a) <sup>2</sup>
Delta d13C (F-G)	0.48	d13C(‰)	PM DE01_094 (a) <sup>2</sup>
Delta d13C (max.)	0.66	d13C(‰)	PM DE01_094 (a) <sup>2</sup>
C4 Sugar Content	1.50	%	PM DE01_026 (a) <sup>1</sup>
F/G Ratio	1.06		PM DE01_094 (a) <sup>2</sup>
Portion of Disaccharides	3.02	%	PM DE01_094 (a) <sup>3</sup>
Portion of Trisaccharides	n.d.	%	PM DE01_094 (a) <sup>3</sup>
Portion of Oligosaccharides	n.d.	%	PM DE01_094 (a) <sup>3</sup>

LC-IRMS is not an official method for F/G ratio; n.a.: not analyzed; n.d.: not detected < 0.7 %; d13C value in permil. vs. V-PDB standard

**SPECIFICATIONS OF PURE HONEY:**  
 Delta d13C (F - G): not more than +/- 1 ‰  
 Delta d13C (max.) of individual d13C values: not more than +/- 2.1 ‰  
 C4 sugar content: < 7 %; portion of oligosaccharides: n.d.

(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) AOAC 998.12  
 (2) Apidologie 39/5 (2008) 574-587 (3) Apidologie 39/5 (2008) 574-587; % related to total sugars.  
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**Interpretation:**

The sample meets the specifications of pure honey. Foreign sugars were not detected.

**Dr. Caroline Indorf**  
*Responsible Scientist, Certified Food Chemist*

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Sample received on / transported by	: 08.06.2018 via Parcel service	Seal	: none
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Packaging / Quantity	: Plastic container / ca. 500g	Start / End of analysis	: 12.06.2018 / 13.06.2018

**ANALYSIS REQUESTED: Sulfonamides and Trimethoprim by LC-MS/MS (101171)**

Parameter	Result	Unit	Method
Sulfaguanidine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfanilamide	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfacetamide	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Succinylsulfathiazole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfaphenazole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfisomidine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfadiazine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfathiazole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfapyridine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamerazine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamethazine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamer	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamethoxyipyridazine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfachloropyridazine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamonomethoxine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfisoxazole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamethoxazole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfadoxine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfaquinoxaline	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfadimethoxine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfabenzamide	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamoxole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfaclozine	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfamethizole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Sulfisozole	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>
Trimethoprim	n.d.	µg/kg	PM DE01_046/084 (a) <sup>1</sup>

n.d. - not detected < limit of quantification 5 µg/kg; n.a. - not analyzed

(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) Inhouse procedure  
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21806130286  
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**Interpretation:**

Regarding the examined parameters and the mentioned limit of quantification the sample corresponds to the legal regulations (regulation (EC) 470/2009 in conjunction with regulation (EU) 37/2010 (dated Feb. 9th 2010)).

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Product	: Honey		
Sample description / Batch	: <b>Lot N° 7-2018 contract 17/PL from 12.09.2017</b>		
Sample received on / transported by	: 08.06.2018 via Parcel service	Seal	: none
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**ANALYSIS REQUESTED: Tetracyclines by LC-MS/MS (101172)**

Parameter	Result	Unit	Method
Oxytetracycline	n.d.	µg/kg	PM DE01_060/116 (a) <sup>1</sup>
Tetracycline	n.d.	µg/kg	PM DE01_060/116 (a) <sup>1</sup>
Chlortetracycline	n.d.	µg/kg	PM DE01_060/116 (a) <sup>1</sup>
Doxycycline	n.d.	µg/kg	PM DE01_060/116 (a) <sup>1</sup>
Demeclocycline	n.d.	µg/kg	PM DE01_060/116 (a) <sup>1</sup>
Methacycline	n.d.	µg/kg	PM DE01_060/116 (a) <sup>1</sup>
Minocycline	n.d.	µg/kg	PM DE01_060/116 (a) <sup>1</sup>
n.d. - not detected < limit of quantification 5 µg/kg			
(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) Inhouse procedure This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

**Interpretation:**

Regarding the examined parameters and the mentioned limit of quantification the sample corresponds to the legal regulations (regulation (EC) 470/2009 in conjunction with regulation (EU) 37/2010 (dated Feb. 9th 2010)). The results are stated as sum of the parent drug and the corresponding 4-Epimer.

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Product	: Honey		
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Sample received on / transported by	: 08.06.2018 via Parcel service	Seal	: none
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Packaging / Quantity	: Plastic container / ca. 500g	Start / End of analysis	: 13.06.2018 / 15.06.2018

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**ANALYSIS REQUESTED: Streptomycin by LC-MS/MS (101173)**

Parameter	Result	Unit	Method
Streptomycin	n.d.	µg/kg	PM DE01_104 (a) <sup>1</sup>
Dihydrostreptomycin	n.d.	µg/kg	PM DE01_104 (a) <sup>1</sup>

n.d. - not detected < 5 µg/kg limit of quantification

(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) Inhouse procedure  
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**Interpretation:**

Regarding the examined parameters and the mentioned limit of quantification the sample corresponds to the legal regulations (regulation (EC) 470/2009 in conjunction with regulation (EU) 37/2010 (dated Feb. 9th 2010)).

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**ANALYSIS REQUESTED: Commercial Analysis (101201)**

Parameter	Result	Unit	Method
HMF	4.7	mg/kg	PM DE01_021 (a) <sup>1</sup>
Moisture content	17.0	%	PM DE01_029 (a) <sup>2</sup>
pH	3.9	pH	PM DE01_042 (a) <sup>3</sup>
Diastase	15.2	DZ	PM DE01_090 (a) <sup>4</sup>
Free acid	17.1	mmol/kg	PM DE01_042 (a) <sup>3</sup>
HMF: n.d. - not detectable < limit of quantification 0.1 mg/kg Diastase: n.d. - not detected < limit of quantification 0.1 DZ Free Acid: n.d. - not detectable < limit of quantification 0.1 mmol/kg			
(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) DIN 10751-3 mod. (2) ASU § 64 LFGB L 40.00-2 mod. (3) Inhouse procedure (4) Inhouse procedure This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

**Interpretation:**

Regarding the examined parameters the sample corresponds to the legal regulations (Honey directive 2001/110/EC from Dec. 20th, 2001; Article 1 in connection with Annex II).

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**ANALYSIS REQUESTED: Colour - Hanna (101337)**

Parameter	Result	Unit	Method
Colour	37	mm Pfund	PM DE01_049 (a) <sup>1</sup>

(a) : accredited under terms of DIN EN ISO/IEC 17025. (na) : not accredited method. (1) Inhouse procedure  
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**Interpretation:**

The Pfund Scale defines the following colour ranges:

- 0-8 mm: equivalent to "water white"
- 9-17 mm: equivalent to "extra white"
- 18-34 mm: equivalent to "white"
- 35-50 mm: equivalent to "extra light amber"
- 51-85 mm: equivalent to "light amber"
- 86-114 mm: equivalent to "amber"
- 115-200 mm: equivalent to "dark"

**Tina Huth**  
*Responsible Scientist, Certified Food Chemist*