

Client:



2303030305
PA366925

FLBE Health GmbH
Eichenstr. 8
76829 Landau

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Germany

Our reference no.	: PI2302280132		
Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 28.02.2023 / 02.03.2023

ANALYSIS REQUESTED: Elements (101491)

Parameter	Result	Unit	Method
Lead (Pb)	n.d.	mg/kg	DIN EN 15763 mod. (a) ¹
Cadmium (Cd)	n.d.	mg/kg	DIN EN 15763 mod. (a) ¹
Mercury (Hg)	n.d.	mg/kg	DIN EN 15763 mod. (a) ¹
n.d. - not detectable < limit of quantification (LOQ): Ag, As, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Te: 0.01 mg/kg (10 ppb); Li: 0.02 mg/kg; Ba, Fe, Mg, Ti, V, Zn: 0.10 mg/kg; Al, Ca, K, Na, P: 1.0 mg/kg; Expanded measurement uncertainty: ± 10 % rel			
(a) : accredited method. (na) : not accredited method. (1) 2010-04; ICP-MS This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

Interpretation:

The found contents lie within the range of the naturally occurring range for this kind of foodstuff (ref.: Swiss Food Compendium, Chapter 23A, EDMZ, 1995; Stefan Bogdanov, Contaminants of bee products, Apidologie 37 (2006); MAFF UK - Analysis of bee products for heavy metals, MAFF Food Surveillance Information Sheet no. 53, Feb 1995, Sheet no. 85, Dec. 2005; Roman et al.: Comparative study of selected toxic elements in propolis and honey, Journal of Apicultural Science, Vol. 55 No. 2, 2011).

Regarding the examined parameters the sample meets the requirements of Commission Regulation (EC) No. 1881/2006 for food supplements (limit values: Pb: 3 mg/kg, Cd: 1 mg/kg, Hg: 0.1 mg/kg).

Dr. Martin Schubert
Responsible Scientist, Certified Food Chemist

Client:



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Our reference no.	: PI2302280132		
Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 28.02.2023 / 02.03.2023

ANALYSIS REQUESTED: Streptomycin by LC-MS/MS (108001)

Parameter	Result	Unit	Method
Streptomycin	n.d.	µg/kg	PM DE01_126 (a) ¹
Dihydrostreptomycin	n.d.	µg/kg	PM DE01_126 (a) ¹

n.d. - not detected < 10 µg/kg limit of quantification

(a) : accredited method. (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).


Hauke Zinow
Responsible Scientist, Certified Food Chemist

Client:



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Our reference no.	: PI2302280132		
Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 28.02.2023 / 02.03.2023

ANALYSIS REQUESTED: Sulfonamides and Trimethoprim by LC-MS/MS (108002)

Parameter	Result	Unit	Method
Sulfaguanidine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfanilamide	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfacetamide	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfadiazine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfathiazole	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfapyridine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfamerazine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfamethazine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfameter	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfamethoxy pyridazine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfachloropyridazine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfamonomethoxine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfisoxazole	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfamethoxazole	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfadoxine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfaquinoxaline	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfadimethoxine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfabenzamide	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfamoxole	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfaclozine	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfamethizole	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Sulfisozole	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹
Trimethoprim	n.d.	µg/kg	PM DE01.046:2019-07 (a) ¹

n.d. - not detected < limit of quantification 10 µg/kg; n.a. - not analyzed

(a) : accredited method. (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.

to be continued...



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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).

Dr. Hartmut Wischmann
Responsible Scientist, Certified Food Chemist

Client:



FLBE Health GmbH
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Our reference no. : **PI2302280132**
Product : Royal Jelly
Sample description / Batch : **Organic Royal Jelly, Batch: 23012901R**
Sample received on / transported by : 28.02.2023 via Parcel service **Seal** : none
Sample temp. when received / stored : RT **Sampling** : Client
Packaging / Quantity : Plastic bag / ca. 300g **Start / End of analysis** : 28.02.2023 / 03.03.2023

ANALYSIS REQUESTED: Tetracyclines by LC-MS/MS (108003)

Parameter	Result	Unit	Method
Oxytetracycline	n.d.	µg/kg	PM DE01.087:2010-09 (a) ¹
Tetracycline	n.d.	µg/kg	PM DE01.087:2010-09 (a) ¹
Chlortetracycline	n.d.	µg/kg	PM DE01.087:2010-09 (a) ¹
Doxycycline	n.d.	µg/kg	PM DE01.087:2010-09 (a) ¹
Demeclocycline	n.d.	µg/kg	PM DE01.087:2010-09 (a) ¹

n.d. - not detected < limit of quantification 10 µg/kg; n.a. - not analyzable
(a) : accredited method. (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). The results are stated as sum of the parent drug and the corresponding 4-Epimer.

Dr. Hartmut Wischmann
Responsible Scientist, Certified Food Chemist

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Our reference no.	: PI2302280132		
Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 01.03.2023 / 06.03.2023

ANALYSIS REQUESTED: 10-Hydroxy-2-decenoic acid by HPLC-UV (108012)

Parameter	Result	Unit	Method
10-Hydroxy-2-decenoic acid	1,96	% (g/100g)	ISO 12824:2016-09 (a) ¹
n.d. not detected < Limit of quantification 0.01%; Expanded measurement uncertainty: ± 5 % rel			
(a) : accredited method. (na) : not accredited method. (1) Annex B.1 This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

Interpretation:

Regarding the examined parameters the analysed sample complies with the chemical requirements of ISO 12824 of royal jelly.

Dr. Martin Schubert
Responsible Scientist, Certified Food Chemist

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Our reference no.	: PI2302280132		
Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 28.02.2023 / 02.03.2023

ANALYSIS REQUESTED: Chloramphenicol by LC-MS/MS (108016)

Parameter	Result	Unit	Method
Chloramphenicol	n.d.	µg/kg	PM DE01.022:2020-07 (a) ¹
n.d. - not detected < limit of quantification 0.1 µg/kg Chloramphenicol < RPA of 0.15 µg/kg (Regulation (EU) 2019/1871)			
(a) : accredited method. (na) : not accredited method. (1) Inhouse procedure (07/2020) This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

Interpretation:

Regarding the examined parameters, the indicated limits of quantification and the reference point for action (RPA) of 0.15 µg/kg for chloramphenicol the sample corresponds to the legal regulations (Regulation (EG) 470/2009 and Regulation (EU) 37/2010 in conjunction with Regulation (EU) 2019/1871).

Hauke Zinow
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Our reference no.	: PI2302280132		
Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 28.02.2023 / 02.03.2023

ANALYSIS REQUESTED: Nitrofurane Metabolites by LC-MS/MS (108019)

Parameter	Result	Unit	Method
AOZ	n.d.	µg/kg	PM DE01.031:2019-07 (a) ¹
AMOZ	n.d.	µg/kg	PM DE01.031:2019-07 (a) ¹
AHD	n.d.	µg/kg	PM DE01.031:2019-07 (a) ¹
SEM	n.d.	µg/kg	PM DE01.031:2019-07 (a) ¹

n.d. - not detected < 0.5 µg/kg
RPA (Referenz Point of Aktion) for nitrofurane metabolites = 0.5 µg/kg
according to Decision 2019/1871/EC

(a) : accredited method. (na) : not accredited method. (1) Inhouse procedure
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Interpretation:

Regarding the examined parameters, the mentioned limit of detection and the RPA of 0,5 µg/kg the sample corresponds to the legal regulations (Regulation (EC) 470/2009 in conjunction with Regulation (EU) 37/2010) and corresponds to Decision 2019/1871/EC.

Mathis Kohröde
Assistant Testing Supervisor, MSc Chemistry

Client:



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Our reference no.	: PI2302280132		
Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 01.03.2023 / 03.03.2023

ANALYSIS REQUESTED: Pesticides and Bee Treatment Agents by GC-MS/MS and LC-MS/MS (108107)

Parameter	Result	Unit	Method
Pesticides	n.d.	mg/kg	(a) ¹
n.d. - not detected < limit of quantification: 0.01 mg/kg			
(a) : accredited method. (na) : not accredited method. (1) ASU § 64 LFGB L 00.00-115:2018-10 (DIN EN 15662) This document may only be reproduced in full. The results given herein apply to the submitted sample only.			

Interpretation:

Referring to the analyzed parameters and considering the above mentioned limit of quantification, in the investigated sample the above stated amounts of residue were determined. Since January 2018 the maximum residue levels (MRLs) of honey are not longer applicable to other apiculture products (pollen, royal jelly) due to their different chemicals characteristics. No MRLs are applicable to other apiculture products until individual products have been identified and listed within this group.

A maximum residue level (MRL) of 0.01 mg/kg per substance and a maximum of two detected substances was set as legally non-binding benchmark by the German Organic Producers and Traders Association (BNN) for pesticide residues in organic food. Regarding the examined parameters and the limits of quantification the sample meets this requirement.

Peter Tebbe
Responsible Scientist, Certified Food Chemist

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Product	: Royal Jelly		
Sample description / Batch	: Organic Royal Jelly, Batch: 23012901R		
Sample received on / transported by	: 28.02.2023 via Parcel service	Seal	: none
Sample temp. when received / stored	: RT	Sampling	: Client
Packaging / Quantity	: Plastic bag / ca. 300g	Start / End of analysis	: 28.02.2023 / 07.03.2023

ANALYSIS REQUESTED: Commercial Analysis of Royal Jelly (108201)

Parameter	Result	Method
Appearance	yellowish,cloudy,jelly-like substance,with small crystals	PM DE01.108 (a) ¹
Odour	sour,pungent,typ. for royal jelly	PM DE01.108 (a) ¹
Taste	sour,pungent,adstringent, typical for royal jelly	PM DE01.108 (a) ¹
Water and volatile substances	64.7 %	ASU L 06.00-3, mod. (a) ²
Ash	1.1 %	PM DE01.311:2019-07 (a)
pH	4.0	SLMB 29.11, mod. (a) ³
Protein (N x 6,25)	14.7 %	Annex C.1** (a)
Total lipid	3.2 %	Annex F** (a)
Fructose (F)	5.5 %	Annex D.1** (a)
Glucose (G)	5.3 %	Annex D.1** (a)
Sucrose (S)	0.7 %	Annex D.1** (a)
Maltose	n.d. %	Annex D.1** (a)
Erlose	n.d. %	Annex D.1** (a)
Melezitose	n.d. %	Annex D.1** (a)
Maltotriose	n.d. %	Annex D.1** (a)
Total sugar (F+G+S)	11.5 %	Annex D.1**
n.d. - not detected < 0.1% Water and volatile substances, ash, protein, lipids, < 0.5 % sugars **Methods according to annexes of ISO 12824:2016		
(a) : accredited method. (na) : not accredited method. (1) DIN 10964 (2) 2014-08, 103°C (3) 2000-07 This document may only be reproduced in full. The results given herein apply to the submitted sample only.		

to be continued...



Interpretation:

Regarding the examined parameters and the mentioned limit of quantification, the present sample shows the above mentioned values. The values are within the expected range for fresh royal jelly (Primarily ISO 12824, secondarily Sabatini et al.: Quality and standardisation of royal jelly, 2009)

C. Schielmann

Christopher Schielmann
Responsible Scientist, Certified Food Chemist