

CERTIFICATE OF ANALYSIS No. 20230328-M3235

Product Information		Sample Information	
Product Name:	Full Spectrum Cannabidiol 20% (CBD) Oil (HSO)	Sample Received ¹ :	2023-03-27
Product Type:	Full Spectrum Oil	Sample Condition:	Suitable
Product ID:	D11024-1	Analysis Completed:	2023-03-28
Batch No.:	Batch 764	Certificate Dated:	2023-03-28
Manufacture Date:	2023-03-27	Retest Interval:	24 months

RESULTS

Compliance with specification TS-P-O-D-20-FS-HSO

Parameter	Method	Requirement/ Limits	Results	Compliant / Non-Compliant ²
Appearance	Visual inspection	From dark green to dark brown	From dark green to dark brown	Compliant
Smell	Sensory analysis	Specific, characteristic smell	Specific, characteristic smell	Compliant
Identification	UV/Vis	Retention time complies with Certified Reference Material	Retention time complies with Certified Reference Material	Compliant
Cannabidiol (CBD), %		≥ 20.00 %	20.595%	Compliant
Additional cannabinoids:				
CBC, %		≥ 0.01%	0.453%	Compliant
CBG, %	HPLC	≥ 0.01%	0.473%	Compliant
CBN, %		≥ 0.01%	0.192%	Compliant
CBDV, %		≥ 0.01%	0.345%	Compliant
Total Tetrahydrocannabinol, %		< 0.20%	0.149%	Compliant

OTHER COMPOUNDS

CBDA, %		N/A	ND	N/A
CBGA, %		N/A	ND	N/A
THCV, %		N/A	ND	N/A
CBL, %	HPLC	N/A	0.066%	N/A
CBDVA, %		N/A	189.000%	N/A
CBDB, %		N/A	ND	N/A
alpha-Pinene, %		N/A	0.308%	N/A
Camphene, %		N/A	ND	N/A
(-)-beta-pinene, %		N/A	0.029%	N/A
beta-myrcene, %	GC-FID Terpenes	N/A	0.289%	N/A
delta-3-carene, %		N/A	ND	N/A
alpha-terpinene, %		N/A	ND	N/A

Parameter	Method	Requirement/ Limits	Results	Compliant / Non-Compliant
Limonene, %		N/A	0.559%	N/A
p-Cymene, %		N/A	ND	N/A
Ocimene, %		N/A	ND	N/A
gamma-terpinene, %		N/A	0.012%	N/A
Terpinolene, %		N/A	ND	N/A
Linalool, %		N/A	0.091%	N/A
(-)-isopuegol, %	GC-FID Terpenes	N/A	ND	N/A
Geraniol, %		N/A	ND	N/A
beta-Caryophyllene, %		N/A	0.348%	N/A
Nerolidol, %		N/A	ND	N/A
(-)-guaiol, %		N/A	ND	N/A
(-)-alpha-bisabol, %		N/A	ND	N/A
Nerol, %		N/A	ND	N/A
alpha-phylandrene, %		N/A	ND	N/A

THE END OF THE CERTIFICATE

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Residual Solvents:				
Ethanol	Gas Chromatography	≤ 50 ppm	ND	Compliant
n-Pentane	Gas Chromatography	≤ 50 ppm	ND	Compliant
2-propanol	Gas Chromatography	≤ 50 ppm	ND	Compliant
n-Heptane	Gas Chromatography	≤ 50 ppm	ND	Compliant
Microbiological quality⁵:				
Enumeration of mesophilic aerobic bacteria	PN-EN ISO 4833-1:2013-12	≤ 10 ⁵ CFU/g	4.0×10 ¹ CFU/g	Compliant
Enumeration of yeasts	PN-ISO 21527-2:2009	≤ 10 ³ CFU/g	< 1.0×10 ¹ CFU/g	Compliant
Enumeration of moulds	PN-ISO 21527-2:2009	≤ 10 ³ CFU/g	< 1.0×10 ¹ CFU/g	Compliant
Specified microorganisms:				
Enumeration of <i>Bacillus Cereus</i>	PN-EN ISO 7932:2005	≤ 10 ³ CFU/g	< 1.0×10 ¹ CFU/g	Compliant
Enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species)	PN-EN ISO 6888-1:2001+A1:2004	≤ 10 ³ CFU/g	< 1.0×10 ¹ CFU/g	Compliant
Detection of Salmonella spp.	PN-EN ISO 6579-1:2017-04	Not Detected in 25 g	Not Detected in 25 g	Compliant
Pesticides⁵:				
Organochlorine pesticides	LMBG-00.00-34:1999 (DFG S19) except section E9	Limits of each Pesticides according to Ph. Eur 2.8.13	< LOQ mg/kg	Compliant
Organophosphorus pesticides			< LOQ mg/kg	Compliant
Pyrethroids			< LOQ mg/kg	Compliant
Propachlor			≤ 0.1 mg/kg	< LOQ mg/kg
Aflatoxin B ¹ ⁵	AFL/01/2012/1	≤ 5 µg/kg	< 1.0 µg/kg	Compliant
Aflatoxin (sum um or B1+B2+G1+G2) ⁵	AFL/01/2012/1	≤ 10 µg/kg	< LOQ µg/kg	Compliant
Ochratoxin A ⁵	PB-456 ed. I of 15.10.2021	≤ 10 µg/kg	< 0.25 µg/kg	Compliant
Heavy metals⁵:				
Arsenic	PN-EN 15763:2010	≤ 1.0 mg/kg	0.13 ± 0.02 mg/kg	Compliant
Cadmium	PN-EN 15763:2010	≤ 0.4 mg/kg	0.018 ± 0.004 mg/kg	Compliant
Lead	PN-EN 15763:2010	≤ 1.0 mg/kg	0.39 ± 0.10 mg/kg	Compliant
Mercury	PN-EN 15763:2010	≤ 0.2 mg/kg	0.012 ± 0.002 mg/kg	Compliant

⁵ Tested in third part laboratory

We declare that this product is free from microbiological and chemical contaminants including residual solvents, microbiological contamination, pesticides, aflatoxins and heavy metals. We ensure this by performing testing on all raw materials used and periodical testing on final products for self control. This report is applicable only to the batch that is written on report. This report cannot be reproduced partially without a prior written consent of BIO IDEA z o.o., and is restricted exclusively to the results and statements presented in the original copy of the Report.