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TEST REPORT **REPORT NO.: 19-10-15127**

Celtic Wind Crops Limited
Malta House
Sean O'Carroll Street
Ardee
Co.Louth.
Att : Mr. Sean McCourt.

Date of Sample:	*09-October-2019*	*Test Report Number:*	*19-10-15127*
Date of Receipt:	*10-October-2019*	*Sample Type:*	*500mg CBD Multi-Complex Hemp Oil*
Date of Report:	*18-October-2019*	*Sample Reference:*	*Ref. BN01-003-0919*
Laboratory Ref. Number:	*19-17327*	*Sample Presentation:* *Weight of sample :*	*10mls. Dispensing Bottle*

Abbreviations :

% Vol :	*percentage volume.*	*% wt:*	*percentage weight.*
mg/L :	*milligrams per litre (ppm).*	*ppm :*	*parts per million or mg per litre.*
mg/g:	*milligrams per gram.*		

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Cannabinoid Profile Analysis

Parameter	Method of Analysis	Method Reference	Units	Reported Levels
Cannabidiol CBD.	HPLC-PDA	JHG-249	% mass	4.790
Cannabigerol CBG.	HPLC-PDA	JHG-249	% mass	0.200
Cannabichromene CBC.	HPLC-PDA	JHG-249	% mass	0.125
Delta-9-Tetrahydrocannabinol THC.	HPLC-PDA	JHG-249	% mass	Not Detected
Cannabidiol acid CBD-A	HPLC-PDA	JHG-249	% mass	0.088
Cannabigerolic acid CBG-A	HPLC-PDA	JHG-249	% mass	0.033
Tetrahydrocannabivarin THCV	HPLC-PDA	JHG-249	% mass	Not Detected
Tetrahydrocannabivarin Carboxylic acid THCV-A	HPLC-PDA	JHG-249	% mass	Not Detected

Gluten	RP-HPLC	JHG-FT-017	ppm.	< 1
Water Activity A_w	Manometric Pressure Measurement	ASTM D8196-18	Without Unit	0.69 A_w
Density	Densitometry	EN ISO 12154:2014	g/cm^3	0.9359

Comment:

Result of Delta-9-Tetrahydrocannabinol (THC) of less than 0.0005% is based on Limit of Detection (LOD) for the Instrumentation used in this method. This is the smallest concentration of analyte that can be reported and is based on analysis of a minimum of 7 spiked samples and 7 method blank samples.

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Microbiological Analysis

Parameter	Method of Analysis	Method Reference	Units	Reported Levels
Staph. aureus	Pour Plate Count	APHA 9222	CFU/g.	4
Salmonella spp.	Pour Plate Count	APHA 9222	CFU/25g.	< 1
Listeria spp.	Pour Plate Count	APHA 9222	CFU/25g.	< 1
Bacillus cereus	Pour Plate Count	APHA 9222	CFU/g.	< 1
Clostridia spp.	Pour Plate Count	APHA 9222	CFU/g.	< 1
Enterobactericeae	Pour Plate Count	APHA 9222	CFU/g.	< 1
Esch. Coli	Pour Plate Count	APHA 9222	CFU/g.	< 1
Yeasts/Molds	Pour Plate Count	APHA 9222	CFU/g.	10

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Terpenes Analysis

Parameter	Method of Analysis	Method Reference	Units	Reported Levels
ß-Caryophellene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	24
Myrecene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	21
ß-Sitosterol	GC-FID	Shimadzu HS-GC-FID	mg/kg.	19
Terpinolene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	18.80
A-Pinene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	15.50
ß-Pinene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	8
Bergamotene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	9
Limonene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	6.50
Merolidol	GC-FID	Shimadzu HS-GC-FID	mg/kg.	6.90
Linalool	GC-FID	Shimadzu HS-GC-FID	mg/kg.	10
Humulene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	9
Bisabolol	GC-FID	Shimadzu HS-GC-FID	mg/kg.	9.90
Valencene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	10
Terpinol	GC-FID	Shimadzu HS-GC-FID	mg/kg.	11
Borneol	GC-FID	Shimadzu HS-GC-FID	mg/kg.	8.50
Delta-3-Carene	GC-FID	Shimadzu HS-GC-FID	mg/kg.	10

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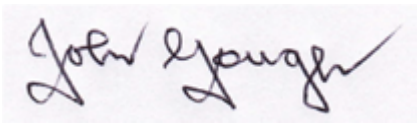
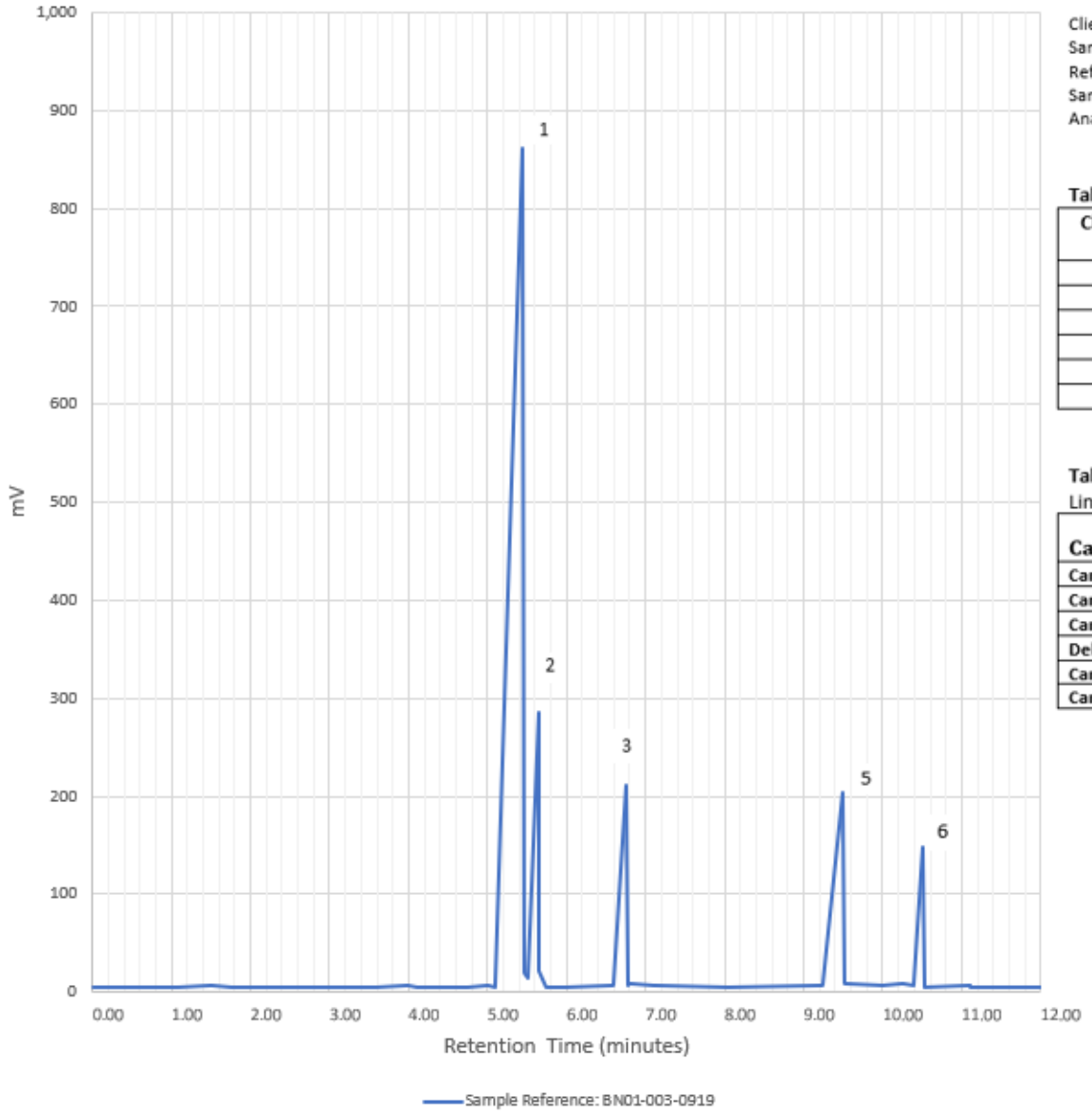


Technical Signatory. **Dated: 18th. October 2019**



Client: **Celtic Wind Crops Ltd.**
Sample: **500mg Multi-Complex Hemp Oil**
Ref.: **BN01-003-0919**
Sample Date: **09.09.19**
Analysis: **Cannabinoids Profile**

Table 1. Results

Chromatogram No.	Cannabinoid	% m/m
1	CBD	4.790
2	CBG	0.200
3	CBC	0.125
4	THC	Not Detected
5	CBD-A	0.088
6	CBG-A	0.033

Table 2.
Linearity Coefficient and % Recovery of Cannabinoids by PDA @ 210nm.

Cannabinoid	Linearity R^2	% Recovery
Cannabidiol CBD.	0.99994	92.7
Cannabigerol CBG.	0.99951	92.9
Cannabichromene CBC.	0.00058	102.1
Delta-9-Tetrahydrocannabinol THC.	0.99925	96.6
Cannabidiolic acid CBD-A.	0.99947	93.8
Cannabigerolic acid CBG-A.	0.99922	91.1