

The scope and methodology of research

Type	Parameter	Unit	Method status	Research method
HHC	Total HHC, Hexahydrocannabinol- S isomer (9s-HHC), Hexahydrocannabinol- R-isomer (9r-HHC)	%m/m	NA	Own analytical procedure
S	total CBD, total Δ 9-THC	%m/m	NA	PB-CL-2:2019 issue 2 from 02.06.2020/GC
M	CBD, CBDA, Δ 9-THC, Δ 9-THCA	%m/m	A	PB-CL-1:2021 issue 1 from 01.07.2021/HPLC
L	CBD, CBDA, CBDV, CBG, CBGA, CBC, CBN, Δ 9-THC, Δ 9-THCA	%m/m	A	PB-CL-1:2021 issue 1 from 01.07.2021/HPLC
XL	A: CBD, CBDA, CBDV, CBG, CBGA, CBC, CBN, Δ 9-THC, Δ 9-THCA NA: CBL, Δ 8-THC, THCv	%m/m	A/NA	A: PB-CL-1:2021 issue 1 from 01.07.2021/HPLC NA: PB-CL-3:2019 issue 1 from 02.06.2020 /HPLC
B	A: CBD, CBDA in the range of 0.5-30.0%, the rest NA or A: CBG, CBGA in the range CBG 0.5-30.0% and CBGA 0.5-10.0% the rest NA and A: Δ 9-THC, Δ 9-THCA; acetone, methanol, ethanol, hexane, isopropanol, heptane, pentane	%m/m %m/m	A NA	PB-CL-1:2019 issue 3 from 26.08.2020/HPLC PB-CL-6:2019 issue 2 from 02.06.2020/GC
LCMS	δ 9-THC at the level of mg/kg (ppm)	mg/kg	NA	LCMS/MS
Pharma DE	CBD, CBDA, CBN, δ 9-THC, δ 9-THCA and δ 8-THC	%m/m	NA	HPLC-UV
X	Pb, Cu, Cr, Cd, Fe, Ni	mg/kg	NA	PB-CL-5:2019 issue 3 from 20.05.2021/ICP PN-EN ISO 11885:2009 (E) PN-EN 13805:2014 (E)
R	Pb, Cu, Cr, Cd, Fe, Ni, Ag, Al, Sn, Mn, V, Zn, Hg, As	mg/kg	NA	PB-CL-5:2019 issue 3 from 20.05.2021/ICP PN-EN ISO 11885:2009 (E) PN-EN 13805:2014 (E)
aR	Pb, Cu, Cr, Cd, Fe, Ni, Ag, Mn, V, Zn (in range 4-200 mg/kg)	mg/kg	A	PN-EN ISO 11885:2009 (E) PN-EN 13805:2014 (E)
J	(14 terpenes) beta-Pinene, beta-Caryophyllene, Phytol, Limonene, Geraniol, (1S)-(-)-Camphor, Terpinolene, beta-Eudesmol, (+)-Borneol, cis-Nerolidol, (-)-alpha-Terpineol, (1S)-(+)-3-Carene, Linalool, p-Cymene; Myrcene	mg/kg	NA	PB-CL-7:2019 issue 2 from 02.06.2020/GCMS
T	(30 terpenes) alpha-Pinene, Camphene, beta-Pinene, 3-Carene, alpha-Terpinenene, (R)-(+)-Limonene, p-Cymene, gamma-Terpinene, Terpinolene, Linalool, L-(-)-Fenchone, Fenchol, Isoborneol, DL-Menthol, (+)-Borneol, Camphor, (-)-alpha-Terpineol, (+/-)-B-Citronellol, Geraniol, (R)-(+)-Pulegone, alpha-beta-Caryophyllene, Geranyl, alpha-Humulene, Nerolidol, (+)-Cedrol, beta-Eudesmol, alpha-Bisabolol, Phytol; Myrcene	mg/kg	NA	PB-CL-7:2019 issue 2 from 02.06.2020 /GCMS
aT	A: Alfa-Pinen, Beta-Pinen, Mircen, Limonen, Alfa-Bisabolol, Alfa-Terpinolen, Beta-linalol, i Kariofilen – accredited in the range 10-2000 mg/kg. NA: Camphene, 3-Carene, alpha-Terpinenene, p-Cymene, gamma-Terpinene, Terpinolene, L-(-)-Fenchone, Fenchol, Isoborneol, DL-Menthol, (+)- Borneol, Camphor, (+/-)-B-Citronellol, Geraniol, (R)-(+)-Pulegone, alpha-Cedrene, Geranyl, alpha-Humulene, Nerolidol, (+)-Cedrol, beta-Eudesmol, Phytol, – badanie nieakredytowane	mg/kg	A/NA	PB-CL-7:2019 issue 4 form 21.09.2021/GCMS
K	acetone, methanol, ethanol, hexane, isopropanol, heptane, pentane (in the range of 10-1000 mg/kg)	mg/kg	A	PB-CL-6:2019 issue 4 from 13.10.2021
P	(49 pesticides): Biphenyl; 2,6-Dichlorobenzonitrile; 3,4 dichloroaniline; Methacrylates; Ethalfuralin; Trifluralin; Benfluralin; Tetrahydrophthalimide; Tetrachloronitrobenzene; 2,3,5,6-tetrachloroaniline; Profluralin; Diphenylamine; Sulfotep; Fluchloralin; Terbufos; Pentachloronitrobenzene; Dichloran; Pentachlorobenzonitrile; Prodimine; Pentachloroaniline; Chlorothalonil; Fenchlorphos (Ronnel); Tolclofos methyl; Isopropalin; Malathion; Dichlofluand; Bromophos methyl; Pendimethalin; Fenthion; Bromophos-ethyl; Chlorfenvinphos; Tolyfluand; Bromfenvinphos methyl; Prothiofos; Oxyfluoren; Tetrachlorvinphos; Bromfenvinphos ethyl; Profenofos; Fenamifos; Iodofenphos; Chlorthiophos; Nitrofen; Ethion; Sulprofos; Carbophenothion; Nitralin; Edifenphos; Leptophos; Coumaphos	mg/kg	NA	PB-CL-4:2019 issue 2 from 04.06.2020 /GCMS
μ-O	Microbiological package for oil: Number of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species); Presence of Salmonella; Coliform count; Number of molds	CFU/g CFU/10 g	A/P	PN-ISO 4832:2007 PN-EN ISO 6579-1:2017-04+A1:2020-09 PN-EN ISO 6888-2:2001+A1:2004 PN-ISO 7954:1999 (W)
μ-S	Microbiological package for dried hemp NEW !!! : Number of β -glucuronidase-positive <i>Escherichia coli</i> ; Number of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species); Yeast and mold count; Presence of <i>Salmonella</i> sticks 10g (N)	CFU/g CFU/10 g	A/P	PN-ISO 16649-2:2004 PN-EN ISO 6888-2:2001+A1:2004 PN-ISO 7954:1999 (W) PN-EN ISO 6579-1:2017-04+A1:2020-09
μ-I	Microbiological package for isolate, extract, dietary supplement: Presence of <i>Salmonella</i> ; Coliform count; Yeast and mold count; Number of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species)	CFU/g CFU/10 g	NA/P	PN-EN ISO 6579-1:2017-04+A1:2020-09 PN-ISO 4832:2007 PN-ISO 7954:1999 (W) PN-EN ISO 6888-2:2001+A1:2004 PN-ISO 16649-2:2004 PN-EN ISO 21528-02:2017-08 PN-EN ISO 11290-2:2017-07
N-b	Nutrients of the oil-basic: Energy (kcal / 100g) from the calculation; Energy (kJ / 100g); Dry weight at 105°C; Total carbohydrates; Fat; Protein; Total ash	kJ/100 g kcal/100 g % (m/m)	A/P	Rozporządzenie (UE) nr 1169/2011 (Dz. U. L 304 from 22.11.2011 from późn. zm.) Rozporządzenie (UE) nr 1169/2011 (Dz. U. L 304 from 22.11.2011 from późn. zm.) Own research procedures
N-a	Nutrients of the oil-advanced Energy (kcal / 100g) from the calculation; Energy (kJ / 100g); Dry weight at 105 ° C; Total carbohydrates, including sugars, fiber; Fat, including saturated fatty acids; Protein; Total ash; salt.	kJ/100 g kcal/100 g % (m/m)	NA/P	Rozporządzenie (UE) nr 1169/2011 (Dz. U. L 304 z 22.11.2011 z późn. zm.) Rozporządzenie (UE) nr 1169/2011 (Dz. U. L 304 z 22.11.2011 z późn. zm.) PN-EN ISO 17294-2:2016-11; PB-DAZ-02 Own analytical procedures
A	Aflatoxins- Aflatoxin B1; Aflatoxin B2; Aflatoxin G1; Aflatoxin G2; The sum of Aflatoxins, the minimum amount of sample 10 ml / 10 g	μ g/kg	A/P	Own analytical procedures
O	Profile of fatty acids, detailing unsaturated omega-3 and omega-6 fatty acids	%m/m	NA	PB-CL-8:2019 issue 1 from 26.08.2020 /GC
V	Vitamins: Vitamin B1, Vitamin B2, Vitamin B6, Vitamin B12, Vitamin C	mg/kg	NA	PB-CL-9:2019 issue 1 from 26.08.2020/LCMS
D	Oil destiny: determination is necessary to express the cannabinoid content in mg per pack volume	g/ml	NA	PN-EN ISO 12185:2002 of 23.12.2002
Mela	Melatonin content	mg/kg	NA	PB-CL-10:2022 wyd.1 z 21.04.2022
F	Flavonoids: Quercetin, catechin, isovitexin, vitexin, luteolin, 5,7,3'-trihydroxyflavone, orientin, narigerin, cannflavin A, myricetin	mg/kg	NA	PB-CL-11:2022 wyd.1 z 21.04.2022/LCMS
W	PAH: polyaromatic hydrocarbons: chrysene, benzo (a) pyrene, benzo[a]anthracene, enzo[b]fluoranthene	μ g/kg	NA	PB-CL-8:2021 issue 1 of 20.01.2021/GCMS
I	Other (on request) <i>Please specify</i> :			
C	Copy/New edition of Certificate of Analysis (10 Euro fee)			

*A – accredited method, NA – non-accredited method, P- method outsourced to an external service provider (SGS, AB 313)