

Endoca

Certificate of Analysis

Hemp Oil 3000mg CBD(cannabidiol)(30%)

ENDOCA LAB
30 N Gould St, Sheridan, Wyoming 82801 USA
Phone: +1(509)218-3083
ionmaps@protonmail.com

Responsible Supervisor:	Dr. Osvald P.
Sample	Batch# 2733
Date of production:	14-July 2023
Date analysis began:	14-July 2023
Date sample report produced:	18-July 2023
Expiry date:	07-2025
Storage temperature:	15°C to 30°C

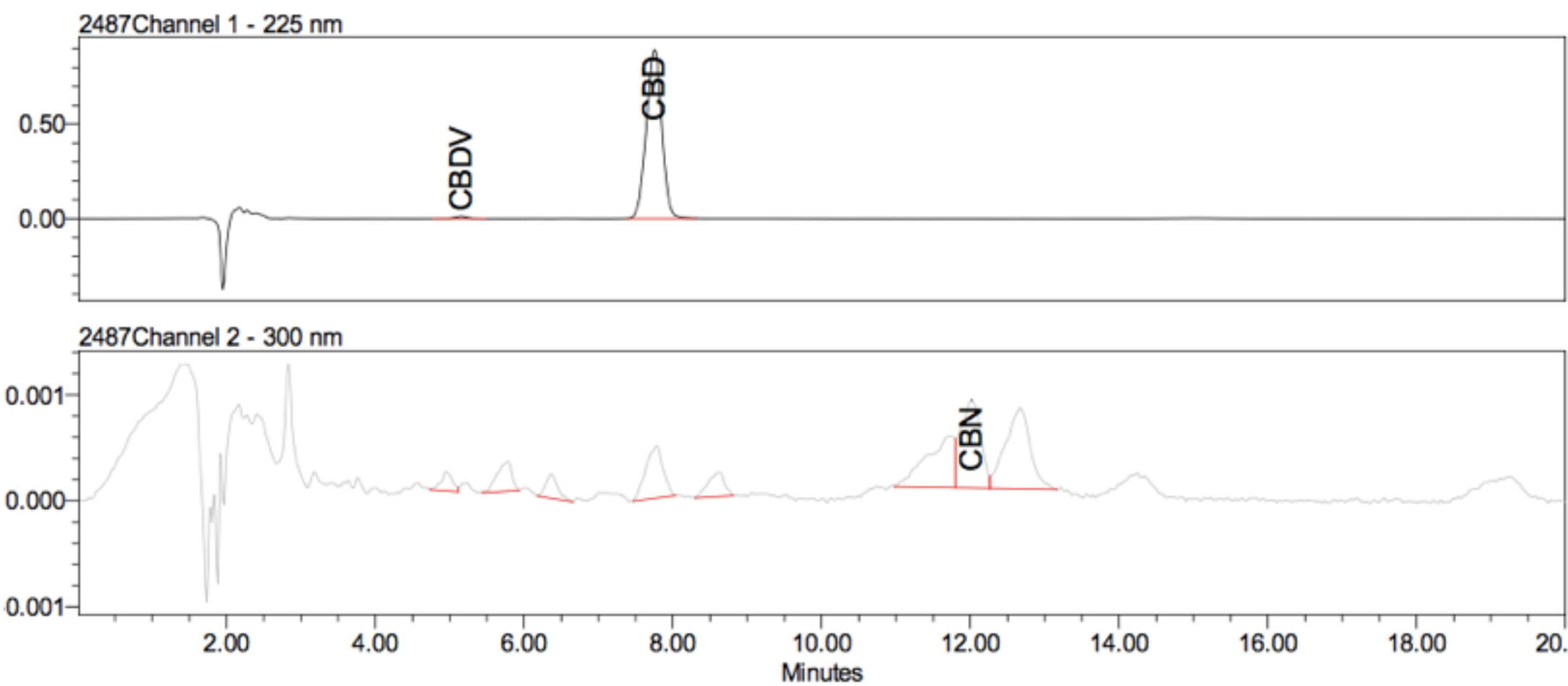
CBD 30.68%

Cannabinoid Profile:

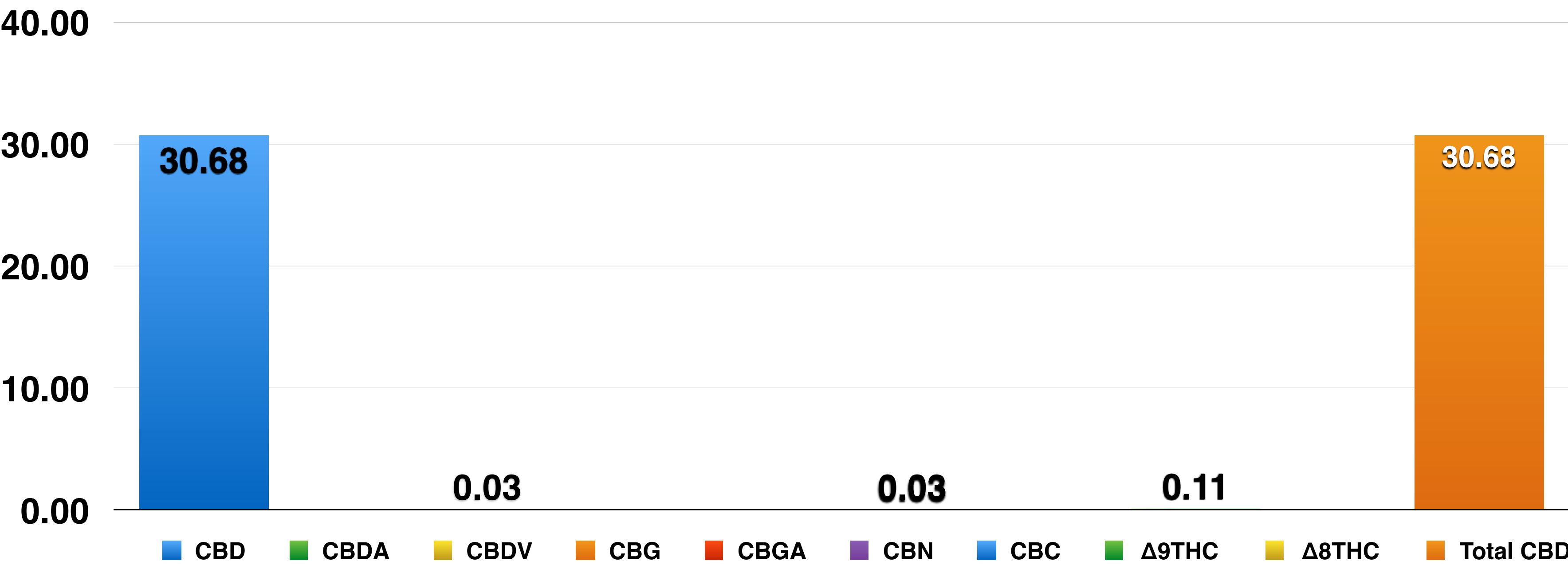
Component	Mass (%)	Amount (mg/g)
CBD	30.68	306.80
CBDA	ND	ND
CBDV	0.03	0.30
CBG	ND	ND
CBGA	ND	ND
CBN	0.03	0.30
CBC	ND	ND
Δ9THC	0.11	1.10
Δ8THC	ND	ND
Total CBD	30.68	306.80

ND - Not detected, LOD - Limit of Detection (LOD=0.001%)

Method: HPLC-UV



Cannabinoids as Percent of Total Mass



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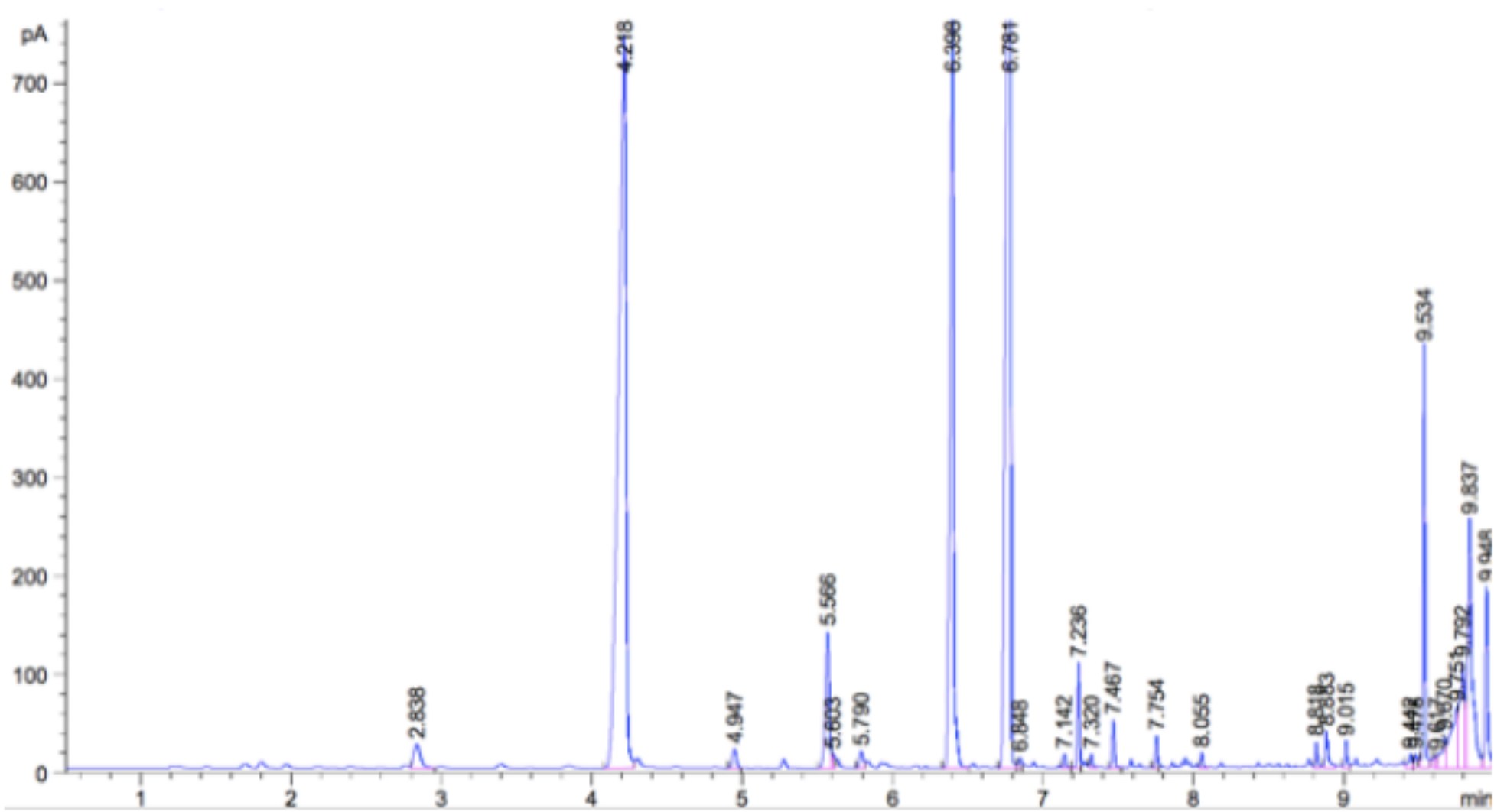
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Terpenoid Profile:

Component	Amount %
β-Caryophyllene	0.09
α-Humulene	ND
Caryophyllene oxide	ND
Myrcene	0.32
α-Pinene	0.59
Terpinolene	ND
Humulene epoxide II	ND
Limonene	0.71
β-Pinene	ND
E-β-Ocimene	ND
Sabinene	ND
Linalool	0.14

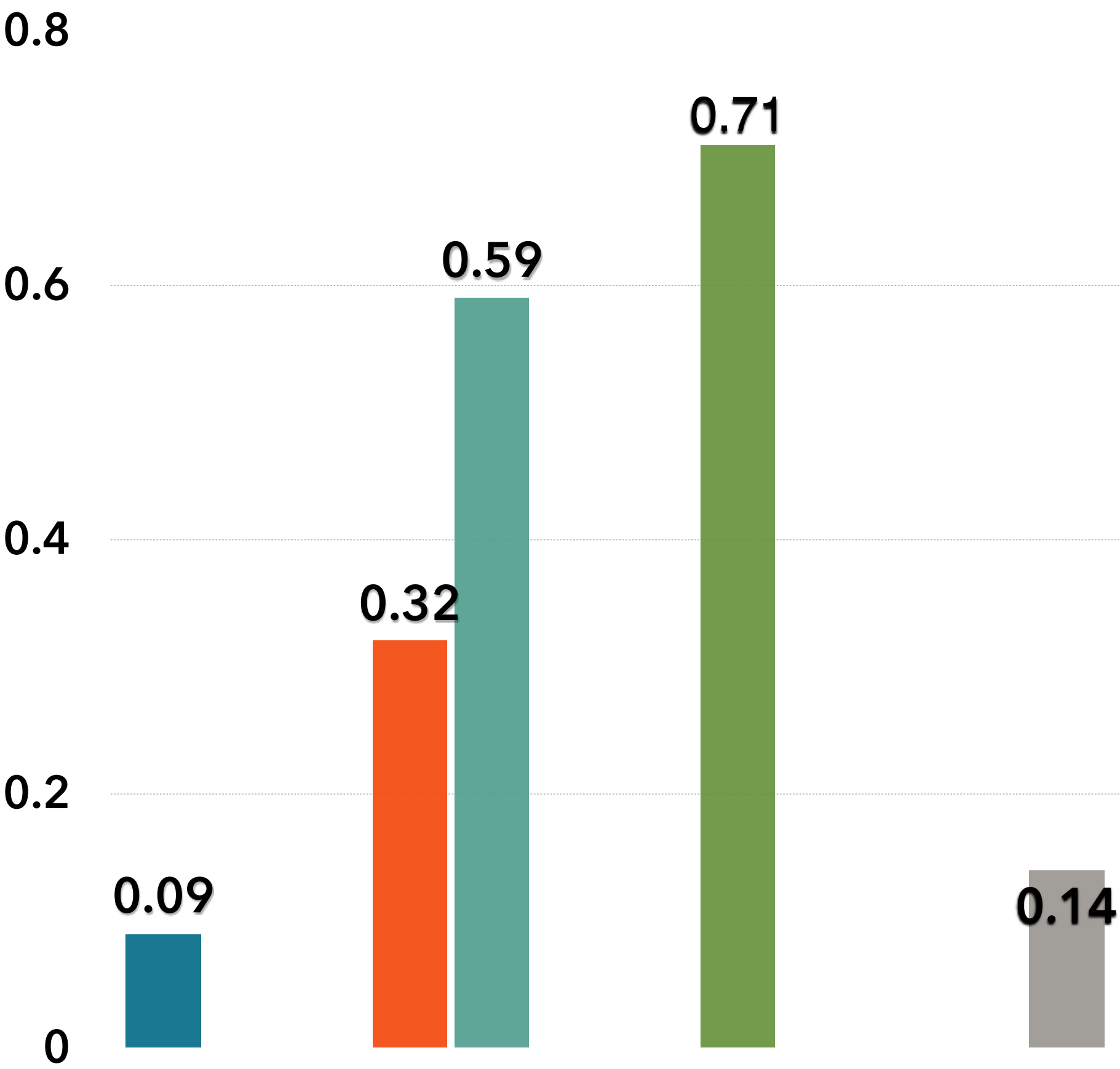
ND - Not Detected

Method: HS-GC-FID



Terpenoid Distribution

- β-Caryophyllene
- α-Humulene
- Caryophyllene oxide
- Myrcene
- α-Pinene
- Terpinolene
- Humulene epoxide II
- Limonene
- β-Pinene
- E-β-Ocimene
- Sabinene
- Linalool



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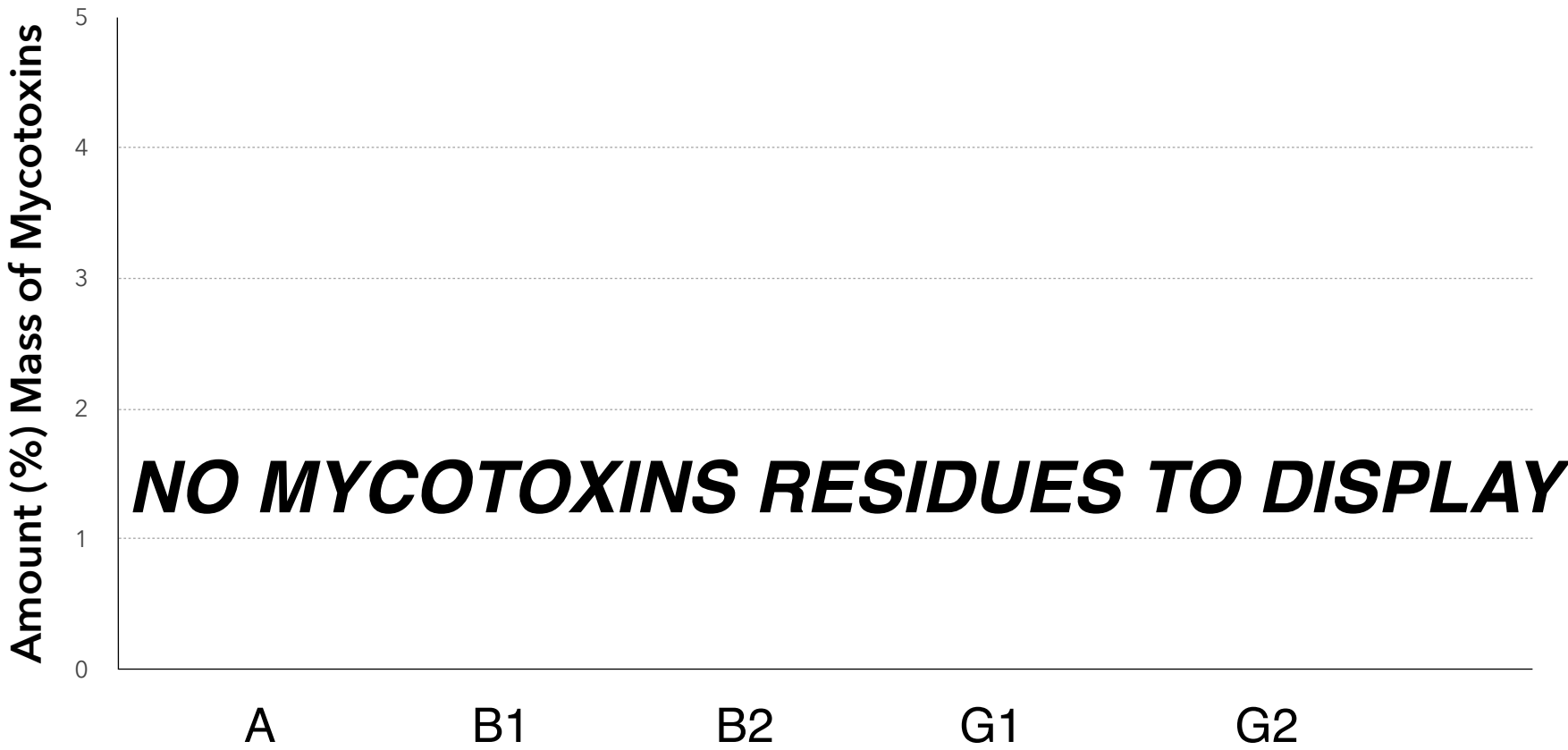
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Microbial Profile:

Component	CFU	Results
Total Plate Count	1 g	<1000
Listeria m.	1 g	ND*
Escherichia c.	1 g	ND*
Salmonella	25 g	ND*
Yeast	1 g	ND*
Mould	1 g	ND*

*ND - Not detected

All Mycotoxins at
Non Detectable (ND) levels



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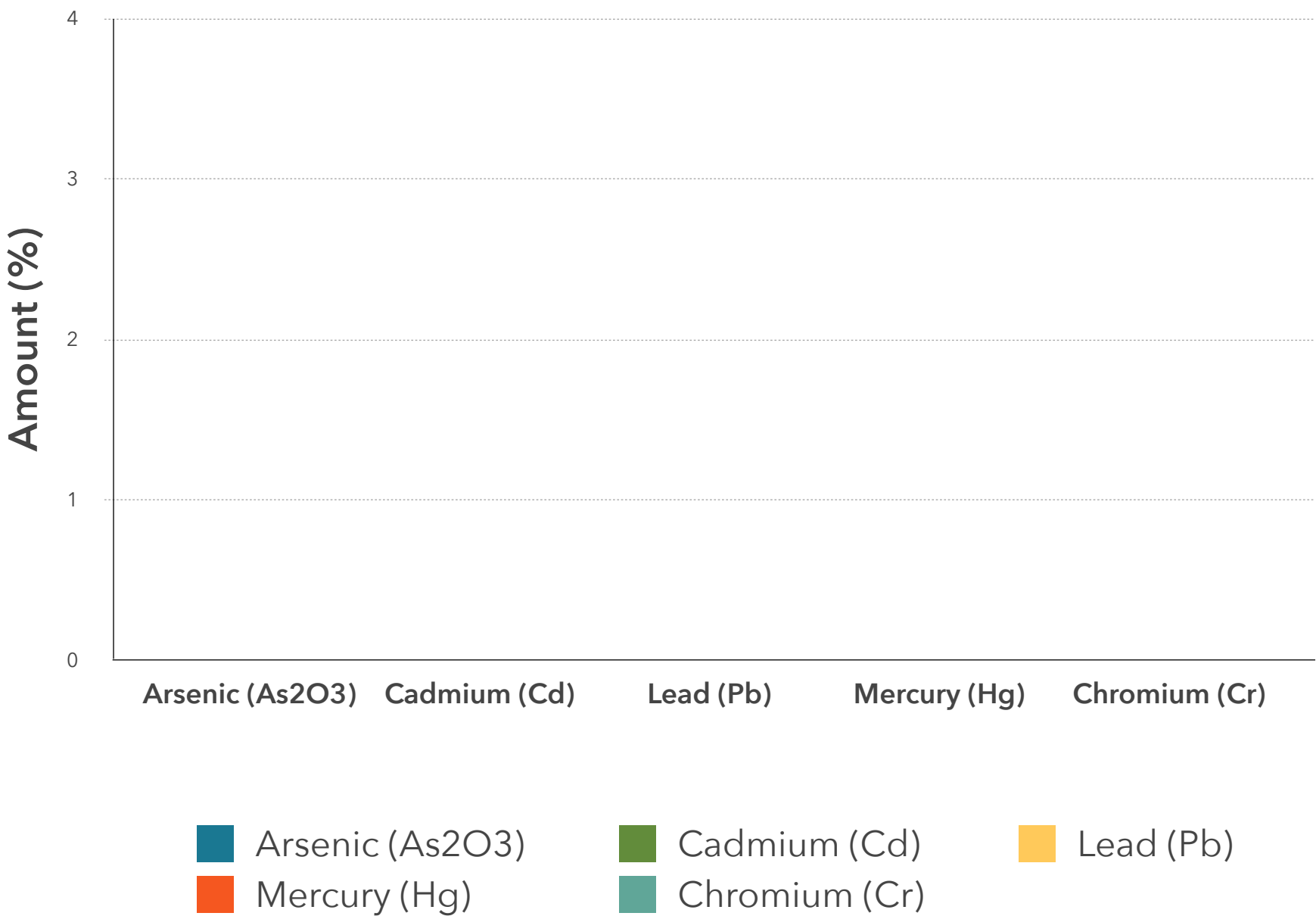
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Heavy Metals Profile:

Component	Mass (%)	Amount (ppm)	Limit** (ppm)
Arsenic (As ₂ O ₃)	ND*	< 0.1	< 0.1
Cadmium (Cd)	ND*	< 0.1	< 0.1
Lead (Pb)	ND*	< 0.1	< 0.1
Mercury (Hg)	ND*	< 0.1	< 0.1
Chromium (Cr)	ND*	< 1	< 1
Tin (Sn)	ND*	< 10	< 10

*ND - Not detected, **Codex STAN 193-1995, GB 2762, EC No. 1881/2006, FDA

All Heavy Metals at Non Detectable (ND) levels



Conclusions:

No heavy metal residues detected.

No flammable residues detected.

No chemical residues detected.

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Pesticide Analysis: Our tests looked for residue of nearly 300 known pesticides finding no evidence of any over detectable limits.

PESTICIDES MEASURED

Acrinathrin Azoxystrobin Biphenhin Bitertanol Biphenyl Bromopropylate Bromuconazole Bupirimate Cadusafos Captafol Captan Chlorphenson Chlorfenapyr Chlorfenvinphos Chlorothalonil Chlorprophame 3,5-Dichloraniline Chlorpyriphos Chlorpyrifos-methyl Chlorthal-dimethyl Cyfluthrin Cypermethrin Cyproconazole Cyprodinil Clomazone o,p-DDE P,P-DDE o,p-DDD P,P-DDD o,p-DDT p,p-DDT Deltamethri Diazinon Diclofop-methyl Dieldrin Dichlobenil Dichlofluanid Dichlorvos Dicloran Dicofol Dicrotophos Diethofencarb Diflubenzuron Dimetachlor Diniconazole Dodemorph Diphenylamine Alpha-Endosulfan Beta-Endosulfan Endosulfan-sulphate Ethion Etofumesate Ethoprophos Ehtoxyquin Etoxazole Etridiazole Etrimphos Famoxadone Fenarimol Fenazaquin Fenchlorphos Fenhexamid Fenihothion Fenpropidin Fenpropimorph Fenvalerate Formothion Fipronil Fipronil-sulfone Fludioxonil Flusilazole Flutriafol Folpet Fuberidazole Furathiocarb Hexaconazole HCB Alpha-HCH Beta-HCH Delta-HCH Heptachlor Heptachlor-epoxidceis Heptachlor-epoxidtreans Iprodione Iprovalicarb Lambda- cyhalothrin Lindane Mecarbam Metalaxv Metazachlor Methidathion Metribuzin Mevinphos Myclobutanil Nuarimol Orthophenylphenol Oxadixyl Paclobutrazol Parathion Parathion-methyl Paraoxon-methyl Paraoxon-ethyl Penconazole Pendimethaline Permethrin Phenthoate Phorate Procymidone Profenofos Propiconazole Propyzamide Pyrazophos Pyrethrins Pyridaben Pyrimethanil Pyriproxyfen Quinoxifen Quitozene Pentachloraniline Phosphamidon Pyrifenox Prometryn Propanil Propoxur Proquinazid Prothiofos Simazine Spiroxamine T au-fluvalinate T ebuconazole T ebufenpyrad T ecnazene T efluthrin T erbuthylazine T etraconazole T etradifon T etramethrine T olclofos-methyl T olylfluanid Transfluthrin Triadimephon Triadimenol Trialate Trifloxystrobin Triflumizole Vinclozolin DDT isomersum Heptachlor (heptachloarnd heptachloer poxidsum) Trifluraline Chlorobenzilate 3-Chloraniline Abamectin (AvermectinBla and AvermectinBlb sum) Acetamidrid Aldicarb Aldikarbsulphone Aldikarbsulphoxide Azinphos-ethyl Azinphos-methyl Benalaxyl Benfuracarb Boscalid Buprofezin Carbaryl Carbendazim Carbofuran 3-hydroksicarbofuran Carbosulfan Chloridazon Cymoxanil Clofentezin Clothianidin Demeton-S-methyl Demeton-S-methylsulfoxid Diafenthion Difenconazole Dimethoate Dimethomorph Diuron EPN Epoxiconazole Ethirimol Etofenprox Fenamidone Fenbuconazole Fenbutatinoxid Fenoxycarb Fenpyroximate Fenpropathrin Fensulfothion Fenthion Fenthionsulphone Fenthionsulphoxide Fluazinam Flufenoxuron Fluquinconazole Fonofos Formetanate Fosthiazate Hexythiazox Imazalil Imidaclopid Indoxacarb Isofenphos Methacrifos Isofenphos-methyl Krezoxim-methyl Linuron Lufenuron Malaaxon Malathion Mepanipirim Mepronil Metamitron Metconazole Methamidophos Methiocarb Methiocarbsulphone Methiocarbsulfoxide Methomyl Methoxyfenozide Metobromuron Monocrotophos Monolinuron Omethoate Oxamyl Pencycuron Phenmedipham Phosalone Phosmet Phosmeot xon Phoxim Pymetrozine Piperonylbutoxide Pyraclostrobin Pyridaphenthion Pyridate Pyrifenox Pirimicarb Pirimicarbdesmethyl Pirimiphos-methyl Primisulfuron-methyl Prochloraz Propamocarb Propargite Prothioconazole Prothioconazole-desthio Quinalphos SpinosynA SpinosynD Sulfotep T ebufenozide T eflubenzuron Thiabendazole Thiaclopid Thiamethoxam Thiodicar Thiophanate-methyl Tralkoxydim Triazophos Trichlorfon Triflumuron Triforine Triticonazole Zoxamide Acephate Amitraz Fenamiphos Fenamiphosulphone Fenamiphosulfoxid Nitempiram Fenthionoxonsulphone Fenthionoxonsulfoxid Kumapho Piriphenox Mehibuzine DEET

Our microbiology analysis is standardized after the following protocols:

ISO 6579:2003

ISO 11290-1:2003

ISO 16649-2:2002

ISO 21527-2:2008

Note on Cannabinoid Testing:

All cannabinoids in their acid forms (ending in "-A") are convertible to their non-acid forms via a decarboxylation process (heating). The components lose mass through this process. To find the total theoretical active cannabinoids, one multiplies the acid forms by 87.7%. For example, CBD-A can be converted to active CBD using the formula: CBD-A x 0.877 = CBD. In this case, the Max CBD for the sample is: Max CBD (%) = (%CBD-A x 0.877) + %CBD. The same calculation assay is valid for THC-A. This method has been validated according to the principles of the International Conference on Harmonisation.

Chromatographic Analysis:

Analysis of cannabinoids content was performed using Waters 2695 (Milford, MA, USA) separation module equipped with auto injector, sample cooler, vacuum degasser and column heater units. Separation of all cannabinoids was accomplished on YMC PRO C18 (150 x 4 mm I.D., S-3µm) RP column coupled with C18 precolumn maintained at 30 °C by a CTO-20AC column oven. Isocratic elution consisted of acetonitrile:water (4:1) was done in 20 min. The flow rate was maintained at 0.8 ml/min. The cannabinoids were monitored using dual absorbance detector Waters 2487 (Milford, MA, USA). The injection volume of 1 mg/ml sample was 10 µl. Data evaluation was performed using Clarity software. Quantification of cannabinoids was obtained from linear regression equation of calibration curve of individual reference standard by plotting concentration versus the area ratio.

Analysis of terpenes was performed using GC-HS system equipped with auto injector. Separation was accomplished on Rx624Sil, 30m, 0.25 µm ID column.