



500 South Arthur Ave Unit 300, Louisville, CO, 80027  
720-726-5132  
[www.bluebirdbotanicals.com](http://www.bluebirdbotanicals.com)

### SPECIFICATIONS: Olive Oil

Olive oil consists of organic extra virgin cold pressed olives and is a raw ingredient used in edible oil products at Bluebird Botanicals.

<b>Application and Use</b>	Ingredient	<b>Appearance</b>	Light brownish green, translucent liquid
<b>Composition</b>	100% olive oil by weight	<b>Odor</b>	Mildy, grassy, lightly pungent odor
<b>Organic Certification</b>	Certified Organic	<b>Consistency</b>	Liquid, partly solid under 39°F
<b>Storage and Shelf Life</b>	36 months from the date of production in original packaging. Store cool dark and dry.	<b>Density</b>	0.9 - 0.92 gr/mL
<b>Ingredients used in</b>	Complete Blends	<b>Solubility</b>	Soluble in oils

<b>Ingredient</b>	Olive oil	<b>Item Code</b>	OO
<b>Botanical Name</b>	<i>Olea europea</i>	<b>Organic Certification</b>	Certified Organic
<b>Plant parts used in oil</b>	Fruit	<b>Country of Origin</b>	Spain

<b>Fatty Acid Profile</b> Method: Ce 2-66 (2009), Ce 1b-89 (2009), and Ce 1i-07 (2009)		<b>Heavy Metals</b> Method: ICP-MS	
Palmitic Acid	7.5-20%	Arsenic	< 10 ppb
Palmitoleic Acid	0.3-3.5%	Cadmium	< 10 ppb
Margaric Acid	0-0.5%	Mercury	< 10 ppb
Margaroleic Acid	0-0.8%	Lead	< 10 ppb
Stearic Acid	0.5-5%	<b>Mycotoxins - Method: UHPLC-MS/MS</b>	
Oleic Acid	55-83%	Total Aflatoxin	< 5 ppb
Linoleic Acid	3.5-21%	Total Ochratoxin	< 5 ppb
Arachidic Acid	0-0.8%	<b>Microbiological Contamination</b> Method: qPCR	
Linolenic Acid	0-1.5%	Total Aerobic Bacterial Count	< 1,000 CFU/g
<b>Nutritional</b> Method :AOAC 954.02, AOCS Cd 8b-90, AOCS Ca 5a-40, Veratox Elisa Gliadin R5		Total Coliform Bacterial Count	< 100 CFU/g
Gluten	<20 ppm	Total Bile Tolerant Gram Negative Count	< 1,000 CFU/g
Peroxide Value	0-12 MEQ/kg	Total Yeast and Mold	< 1,000 CFU/g
Fat	96-100%		
<b>Solvents</b> Method: GC/MS		<b>Pesticides</b> Method: GC/MS and/or LC/MS	
Propane, Propane, Butanes, Pentane, Hexane, Benzene, Heptane, Toluene, Xylenes Ethanol, Acetone, Isopropyl Alcohol	<LOQ (100 ppm)	Abamectin 71751-41-2, Acequinocyl 57960-19-7, Acequinocyl 57960-19-7, Bifenazate 149877-41-8, Bifenthrin 82657-04-03, Chloromequat chloride 999-81-5, Cyfluthrin 68359-37-5, Cyfluthrin 68359-37-5, Daminozide 1596-84-5, Etoxazole 153233-91-1, Fenoxycarb 72490-01-8, Paclobutrazol 76738-62-0, Pyrethrin 8003-34-7, Spinosad 168316-95-8, Spiromesifen 283594-90-1, Myclobutanil 88671-89-0, Imazalil 35554-44-0, Imidacloprid 138261-41-3, Spirotetramat 203313-25-1, Trifloxystrobin 141517-21-7	< 10 ppb

### SPECIFICATIONS: Hemp Terpenes

Hemp terpenes are steam distilled hemp extract used as a raw ingredient in oil products at Bluebird Botanicals.

<b>Application and Use</b>	Ingredient	<b>Solubility</b>	Soluble in oils and ethanol
<b>Composition</b>	100% Cannabis CO2 extract by weight	<b>Appearance</b>	Transparent liquid, light yellow
<b>Organic Certification</b>	Not certified	<b>Odor</b>	Citrusy, pungent, spicy, herbaceous
<b>Storage and Shelf Life</b>	29 months from the date of production in original packaging. Store cool dark and dry.	<b>Consistency</b>	Liquid
<b>Products used in</b>	Complete Blends	<b>Density</b>	0.8450 - 0.8650

<b>Ingredient</b>	Hemp Terpenes	<b>Item Code</b>	TERP
<b>Botanical Name</b>	<i>Cannabis sativa</i>	<b>Organic Certification</b>	Not certified
<b>Plant parts used in oil</b>	Stalk, stem and flower	<b>Country of Origin</b>	France, Canada, Italy



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Volatile Compounds Method: GC-MS		Heavy Metals Method: ICP-MS	
Total Essential Oil Content	>95%	Arsenic	< 100 ppb
Myrcene	15-32%	Cadmium	< 100 ppb
Beta-Caryophyllene	18-35%	Mercury	< 100 ppb
Alpha-Humulene	5-18%	Lead	< 200 ppb
Terpinolene	2-12%	Mycotoxins Method: UHPLC-MS/MS	
Limonene	1-10%	Total Aflatoxin	< 5 ppb
Mycotoxins Method: IAC		Total Ochratoxin	< 5 ppb
Total Aflatoxin	< 5 ppb	Microbiological Contamination Method: qPCR	
Total Ochratoxin	< 5 ppb	Total Aerobic Bacterial Count	< 1,000 CFU/g
Volatile Compounds Method: GC-MS		Total Coliform Bacterial Count	< 100 CFU/g
Total Essential Oil Content	>95%	Total Bile Tolerant Gram Negative Count	< 1,000 CFU/g
Myrcene	15-32%	Total Yeast and Mold	< 1,000 CFU/g
Solvents Method: GC/MS		Pesticides Method: GC/MS and/or LC/MS	
Propane, Propane, Butanes, Pentane, Hexane, Benzene, Heptane, Toluene, Xylenes Ethanol, Acetone, Isopropyl Alcohol	<LOQ (100 ppm)	Abamectin 71751-41-2, Acequinocyl 57960-19-7, Acequinocyl 57960-19-7, Bifenazate 149877-41-8, Bifenthrin 82657-04-03, Chloromequat chloride 999-81-5, Cyfluthrin 68359-37-5, Cyfluthrin 68359-37-5, Daminozide 1596-84-5, Etoxazole 153233-91-1, Fenoxycarb 72490-01-8, Paclobutrazol 76738-62-0, Pyrethrin 8003-34-7, Spinosad 168316-95-8, Spiromesifen 283594-90-1, Myclobutanil 88671-89-0, Imazalil 35554-44-0, Imidacloprid 138261-41-3, Spirotetramat 203313-25-1, Trifloxystrobin 141517-21-7	< 0ppb

### Specification Sheet: Hemp Extract Complete Concentrated

Hemp Extract Complete Concentrated is an oil meant for oral ingestion. It consists of hemp extract blended with cold pressed organic olive oil, and steam distilled hemp terpenes.

<b>Application and Use</b>	Dietary Supplement	<b>Appearance</b>	Greenish-brown, oily liquid
<b>Composition</b>	9 - 13% hemp extract by weight 85- 90% olive oil by weight 1.2 - 1.6% hemp terpenes by weight	<b>Odor</b>	Grassy, earthy odor, with citrusy green high notes
<b>Organic Certification</b>	Extract: not certified Olive oil: certified organic Terpenes: Not certified	<b>Consistency</b>	Viscous below 32 degrees Fahrenheit
<b>Storage and Shelf Life</b>	500 days from the date of production in original packaging. Store cool dark and dry.	<b>Density</b>	9.15 g/mL - 9.25 g/ mL
<b>Packaging</b>	10ml, 30ml, 60ml amber glass essence bottle	<b>Solubility</b>	Soluble in ethanol and oils

<b>Ingredient</b>	Olive oil	<b>Item Code</b>	OO
<b>Botanical Name</b>	<i>Olea europaea</i>	<b>Organic Certification</b>	Certified organic
<b>Plant parts used in oil</b>	Fruit	<b>Country of Origin</b>	Italy, Spain, Tunisia

<b>Ingredient</b>	Hemp CBD Isolate	<b>Item Code</b>	ISO
<b>Botanical Name</b>	<i>Cannabis sativa</i>	<b>Organic Certification</b>	Not certified
<b>Plant parts used in oil</b>	Seed, stem, flower	<b>Country of Origin</b>	USA

<b>Ingredient</b>	Hemp CO2 extract	<b>Item Code</b>	DCFS
<b>Botanical Name</b>	<i>Cannabis sativa</i>	<b>Organic Certification</b>	Not certified
<b>Plant parts used in oil</b>	Seed, stem, flower	<b>Country of Origin</b>	USA

<b>Ingredient</b>	Hemp CO2 extract (RAW, concentrated)	<b>Item Code</b>	NDCFS
<b>Botanical Name</b>	<i>Cannabis sativa</i>	<b>Organic Certification</b>	Not certified
<b>Plant parts used in oil</b>	Seed, stem, flower	<b>Country of Origin</b>	USA



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<b>Ingredient</b>	Hemp Ethanol extract	<b>Item Code</b>	DEFS
<b>Botanical Name</b>	<i>Cannabis sativa</i>	<b>Organic Certification</b>	Not certified
<b>Plant parts used in oil</b>	Seed, stem, flower	<b>Country of Origin</b>	USA

<b>Ingredient</b>	Hemp terpenes	<b>Item Code</b>	TERP
<b>Botanical Name</b>	<i>Cannabis sativa</i>	<b>Organic Certification</b>	Not certified
<b>Plant parts used in oil</b>	Herb	<b>Country of Origin</b>	Canada, France, Italy

Our Low THC Hemp Extract Product is manufactured by Bluebird Botanicals according to cGMP practices.

Batch: COX 0399. Batch Size: 189.25 Liters (172.217 Kg). Total Quantity Produced (based on projections: a portion of this batch is still being processed) :10 ml (milliliters) bottle: 2532. 30 ml bottle: 2392. 60 ml bottle: 1487. Yield: 98.44%. Supplier Lot Codes: Primary Ingredient: R0122718BB, PETE-2018, 111318KY13, SCHO1-1WCD, MA-013-001. Carrier: SE0293. Essential: E0C0115D.

Potency - Method: HPLC		Mycotoxins Method: UHPLC-MS/MS	
Total Cannabinoids	50 - 60 mg/ml (1500 - 1800 mg/ounce)	Total Aflatoxin	< 5 ppb
CBD:THC Ratio	Appx 1:1 (+/- 10%)	Total Ochratoxin	< 5 ppb
Tetrahydrocannabinol (THC)	< 0.3%		
Heavy Metals Method: ICP_MS		Microbiological Contamination Method: qPCR	
Arsenic	< 10 ppb	Total Aerobic Bacterial Count	< 1,000 CFU/g
Cadmium	< 10 ppb	Total Coliform Bacterial Count	< 100 CFU/g
Mercury	< 10 ppb	Total Bile Tolerant Gram Negative Count	< 1,000 CFU/g
Lead	< 50 ppb	Total Yeast and Mold	< 1,000 CFU/g
Solvents Method: GC/MS		Pesticides Method: GC/MS and/or LC/MS	
Propane, Butanes, Pentane , Heptane, Ethanol, Acetone, Isopropyl Alcohol	<LOQ (100 ppm)	Abamectin 71751-41-2, Acequinocyl 57960-19-7, Acequinocyl 57960-19-7, Bifenazate 149877-41-8, Bifenthrin 82657-04-03, Chlormequat chloride 999-81-5, Cyfluthrin 68359-37-5, Cyfluthrin 68359-37-5, Daminozide 1596-84-5, Etoxazole 153233-91-1, Fenoxycarb 72490-01-8, Paclobutrazol 76738-62-0, Pyrethrin 8003-34-7, Spinosad 168316-95-8 , Spiromesifen 283594-90-1, Myclobutanil 88671-89-0, Imazalil 35554-44-0 , Imidacloprid 138261-41-3 , Spirotetramat 203313-25-1, Trifloxystrobin 141517-21-7	< 50ppb
Hexane	< 6 ppm		
Benzene	< 0.2 ppm		
Toluene	< 18 ppm		
Xylenes	< 43 ppm		

DISCLOSURE OF PRODUCT COMPONENTS: OUR LOW THC HEMP EXTRACT PRODUCTS ARE BLENDED USING A COMBINATION OF FULL SPECTRUM CANNABINOID EXTRACTS, ORGANIC CARRIER OILS AND ESSENTIAL OILS, THE CONTENTS, IDENTITY AND PURITY OF WHICH HAVE BEEN TESTED USING A VARIETY OF METHODS, INCLUDING AOAC-APPROVED METHODS OF ANALYSIS. AOAC INTERNATIONAL IS AN INDEPENDENT, INTERNATIONALLY RECOGNIZED 501(C)(3) NOT-FOR-PROFIT ASSOCIATION WHOSE ANALYTICAL STANDARDS APPLY TO A BROAD RANGE OF INDUSTRIES INCLUDING FOODS, BEVERAGES AND DIETARY SUPPLEMENTS. INGREDIENT AND SERVICE PROVIDERS HAVE BEEN QUALIFIED BY AN INTERNAL QUALITY MANAGEMENT TEAM ACCORDING TO A CGMP-COMPLIANT PROTOCOL. THE QUALIFICATION OF A SUPPLIER ENTAILS INGREDIENT TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING ASSAYS: FATTY ACIDS (OFFICIAL METHODS OF ANALYSIS OF AOAC INTERNATIONAL, 18TH ED., METHODS 922.06 AND 954.02), PEROXIDE VALUE (AOAC INTERNATIONAL, OFFICIAL METHODS 965.33 AND 983.23), YEAST AND MOLD ANALYSIS (AOAC INTERNATIONAL, OFFICIAL METHOD 997.02), AEROBIC PLATE COUNT (AOAC INTERNATIONAL, OFFICIAL METHOD 990.12), ELEMENTS (AOAC INTERNATIONAL, OFFICIAL METHODS 2011.19 AND 993.14), REGULATED MYCOTOXINS (CITATION: ANALYTICAL AND BIOANALYTICAL CHEMISTRY, 402:2675-2686), E. COLI AND COLIFORMS (AOAC INTERNATIONAL, OFFICIAL METHOD 991.14), MULTI-RESIDUE ANALYSIS (AOAC INTERNATIONAL, OFFICIAL METHOD 2007.01), GLUTEN (AOAC INTERNATIONAL, OFFICIAL METHOD 2012.01), RESIDUAL SOLVENTS (UNITED STATES PHARMACOPEIA METHOD 467) . THE AFOREMENTIONED METHODS OF ANALYSIS UTILIZE BUT ARE NOT NECESSARILY LIMITED TO QUANTIFICATION BY HPLC, UPLC/MS, GC/MS, IAC, SFC, ICP-MS. INGREDIENT CONSISTENCY IS ADDITIONALLY EVALUATED THROUGH REGULAR ORGANOLEPTIC SCREENING TO CONTROL TASTE, ODOR, COLOR AND CONSISTENCY. THE FOLLOWING SUPPLIERS/ MANUFACTURERS/SERVICE PROVIDERS HAVE BEEN QUALIFIED BY INTERNAL QUALITY MANAGEMENT: HEMP PRODUCTION SERVICES, SUPPLIER OF ORGANIC HEMP SEED OIL, JEDWARDS INTERNATIONAL, SUPPLIER OF ORGANIC HEMP SEED OIL, ORGANIC OLIVE OIL, ORGANIC BLACK CUMIN SEED OIL, EDEN BOTANICALS, SUPPLIER OF SUPERCRITICAL CO2 EXTRACTED FRANKINCENSE (BOSWELLIA CARTERII) AND CANNABIS ESSENTIAL OIL, EBL HEALTH, MANUFACTURERS/SUPPLIERS OF CO2 HEMP EXTRACTS, PHYTO BOTANICS, MANUFACTURER OF ETHANOL HEMP EXTRACT, HAMMER, MANUFACTURER/CO-PACKER OF GEL CAPSULES. PROPRIETARY LOW THC HEMP EXTRACT PRODUCTS ARE MANUFACTURED BY BLUEBIRD BOTANICALS ACCORDING TO CGMP PRACTICES. ALL PRODUCTS ARE TESTED FOR MYCOTOXINS, PESTICIDES, ELEMENTS, RESIDUAL SOLVENTS, TERPENE PROFILES AND CANNABINOID POTENCY TO CONTROL ADHERENCE TO PRODUCT SPECIFICATIONS AND GUARANTEE CONFORMITY TO THE STRICT DEFINITION OF INDUSTRIAL HEMP (<0.3% DELTA9-THC, INCLUDING PRECURSORS). THIRD PARTY LABORATORY ANALYSIS IS CONDUCTED BY BOTANACOR SERVICES, DELTA VERDE LABORATORY, PROVERDE LABORATORIES AND COVANCE INC. ISO ACCREDITED (ISO 17025) ASSAYS ARE PROVIDED BY PROVERDE LABORATORIES AND COVANCE INC. SEE PRODUCT SPECIFICATION SHEET ABOVE FOR PRODUCT/INGREDIENT BATCH INFORMATION AND PROJECTED PACKAGING PLAN. ALL SUPPLIERS OF PACKAGING SUPPLIES HAVE BEEN QUALIFIED ACCORDING TO CGMP STANDARDS.