CERTIFICATE OF ANALYSIS

DATE ISSUED: 04/02/2024

TRUE TERPENES

IDENTIFICATION

PRODUCT NAME	Goji OG
PRODUCT DESIGNATION	Proprietary Terpene Blend – Terpene Strain Profile
TRUE TERPENES PRODUCT #	TTP-PN-GJI
FINISHED GOOD LOT #	24032735
RECOMMENDED USE BY DATE	August 2025
CAS #	Mixture
EC #	Mixture
MANUFACTURING DATE	3/27/2024
DENSITY*	0.85 g/mL

PARAMETER	SPECIFICATION	RESULT
APPEARANCE	CLEAR, LIGHT YELLOW LIQUID	PASSES VISUALLY
ODOR	CITRUS, EARTH, WOOD, FLORAL	PASSES SENSORY
HEAVY METALS	PASSES TESTING	PASSES TESTING
PESTICIDES	PASSES TESTING	PASSES TESTING
RESIDUAL SOLVENTS	PASSES TESTING	PASSES TESTING

ADDITIONAL PRODUCT INFORMATION:

Storage Conditions:

Stable when stored in its original container securely tightened and away from heat, open flames, sunlight, combustible materials and hot surfaces. Store in a cool, dry, and well-ventilated place.

Heavy Metal Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Arsenic	0.11	0.0991	< LOQ	Cadmium	0.11	0.0991	< LOQ
Lead	0.11	0.0991	< LOQ	Mercury	0.06	0.0495	< LOQ

Pesticide Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Abamectin	0.07	0.07	< LOQ	Acephate	0.02	0.02	< LOQ
Acequinocyl	0.03	0.03	< LOQ	Acetamiprid	0.05	0.05	< LOQ
Aldicarb	0.10	0.10	< LOQ	Allethrin	0.10	0.10	< LOQ
Azadirachtin	0.50	0.50	< LOQ	Azoxystrobin	0.01	0.01	< LOQ
Benzovindiflupyr	0.01	0.01	< LOQ	Bifenazate	0.01	0.01	< LOQ
Bifenthrin	0.10	0.10	< LOQ	Boscalid	0.01	0.01	< LOQ
Buprofezin	0.01	0.01	< LOQ	Captan	0.70	0.70	< LOQ
Carbaryl	0.03	0.03	< LOQ	Carbofuran	0.01	0.01	< LOQ
Chlorantraniliprole	0.01	0.01	< LOQ	Chlordane	0.10	0.10	< LOQ
Chlorfenapyr	0.10	0.10	< LOQ	Chlorpyrifos	0.01	0.01	< LOQ
Clofentezine	0.01	0.01	< LOQ	Clothianidin	0.03	0.03	< LOQ
Coumaphos	0.01	0.01	< LOQ	Cyantraniliprole	0.01	0.01	< LOQ
Cyfluthrin	0.40	0.40	< LOQ	Cypermethrin	0.30	0.30	< LOQ
Cyprodinil	0.01	0.01	< LOQ	Daminozide	0.05	0.05	< LOQ
Deltamethrin	0.50	0.50	< LOQ	Diazinon	0.01	0.01	< LOQ
Dichlorvos	0.05	0.05	< LOQ	Dimethoate	0.01	0.01	< LOQ

**Density is calculated based on product formulation.*

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Pesticide Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Dimethomorph	0.05	0.05	< LOQ	Dinotefuran	0.05	0.05	< LOQ
Dodemorph	0.05	0.05	< LOQ	Endosulfan Sulfate	0.05	0.05	< LOQ
α-Endosulfan	0.10	0.05	< LOQ	β-Endosulfan	0.05	0.05	< LOQ
Ethoprophos	0.01	0.01	< LOQ	Etofenprox	0.01	0.01	< LOQ
Etoxazole	0.01	0.01	< LOQ	Etridiazole	0.05	0.05	< LOQ
Fenhexamid	0.10	0.10	< LOQ	Fenoxycarb	0.01	0.01	< LOQ
Fenpyroximate	0.02	0.02	< LOQ	Fensulfothion	0.01	0.01	< LOQ
Fenthion	0.01	0.01	< LOQ	Fenvalerate	0.20	0.20	< LOQ
Fipronil	0.01	0.01	< LOQ	Flonicamid	0.03	0.03	< LOQ
Fludioxonil	0.01	0.01	< LOQ	Fluopyram	0.01	0.01	< LOQ
Hexythiazox	0.01	0.01	< LOQ	Imazalil	0.01	0.01	< LOQ
Imidacloprid	0.01	0.01	< LOQ	Iprodione	0.50	0.50	< LOQ
Kinoprene	0.05	0.05	< LOQ	Kresoxim-methyl	0.01	0.01	< LOQ
Malathion	0.01	0.01	< LOQ	Metalaxyl	0.01	0.01	< LOQ
Methiocarb	0.01	0.01	< LOQ	Methomyl	0.03	0.03	< LOQ
Methoprene	1.00	1.0	< LOQ	Mevinphos	0.03	0.03	< LOQ
MGK-264	0.05	0.05	< LOQ	Myclobutanil	0.01	0.01	< LOQ
Naled	0.10	0.10	< LOQ	Novaluron	0.03	0.03	< LOQ
Oxamyl	0.50	0.50	< LOQ	Paclobutrazol	0.01	0.01	< LOQ
Parathion-Methyl	0.03	0.03	< LOQ	Pentachloronitrobenzene (Quintozene)	0.02	0.02	< LOQ
Permethrin	0.04	0.04	< LOQ	Phenothrin	0.03	0.03	< LOQ
Phosmet	0.01	0.01	< LOQ	Piperonyl butoxide	0.20	0.20	< LOQ
Pirimicarb	0.01	0.01	< LOQ	Prallethrin	0.05	0.05	< LOQ
Propiconazole	0.01	0.01	< LOQ	Propoxur	0.01	0.01	< LOQ
Pyraclostrobin	0.01	0.01	< LOQ	Pyrethrins	0.03	0.03	< LOQ
Pyridaben	0.02	0.02	< LOQ	Resmethrin	0.02	0.02	< LOQ
Spinetoram	0.01	0.01	< LOQ	Spinosad	0.01	0.01	< LOQ
Spirodiclofen	0.25	0.25	< LOQ	Spiromesifen	0.03	0.03	< LOQ
Spirotetramat	0.01	0.01	< LOQ	Spiroxamine	0.01	0.01	< LOQ
Tebuconazole	0.01	0.01	< LOQ	Tebufenozide	0.01	0.01	< LOQ
Teflubenzuron	0.03	0.03	< LOQ	Tetrachlorvinphos	0.01	0.01	< LOQ
Tetramethrin	0.05	0.05	< LOQ	Thiacloprid	0.01	0.01	< LOQ
Thiamethoxam	0.01	0.01	< LOQ	Thiophanate-Methyl	0.03	0.03	< LOQ
Trifloxystrobin	0.01	0.01	< LOQ				

Residual Solvent Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
1-Butanol	5000	10	< LOQ	1-Pentanol	5000	500	< LOQ
1,2-Dichloroethane	1.0	1.0	< LOQ	1,2-Dimethoxyethane	100	1.0	< LOQ
1,4-Dioxane	380	10	< LOQ	2-Butanol	5000	10	< LOQ
2-Butanone (Methylethylketone)	300	5	< LOQ	2-Ethoxyethanol	160	10	< LOQ
2-Methyl-1-Propanol	5000	500	< LOQ	2-Methylbutane (Isopentane)	750	10	< LOQ
2-Methylpentane	10	10	< LOQ	2-Propanol (IPA)	500	10	< LOQ
2,2-Dimethylbutane	10	10	< LOQ	2,2-Dimethylpropane (Neopentane)	750	10	< LOQ

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DATE ISSUED: 04/02/2024

TRUE TERPENES

Residual Solvent Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
2,3-Dimethylbutane	10	10	< LOQ	3-Methyl-1-Butanol (Isoamyl Alcohol)	500	500	< LOQ
3-Methylpentane	10	10	< LOQ	Acetic acid	5000	250	< LOQ
Acetone	500	10	< LOQ	Acetonitrile	60	10	< LOQ
Anisole	5000	500	< LOQ	Benzene	1.0	1.0	< LOQ
Butanes	500	10	< LOQ	Butyl acetate	500	500	< LOQ
Chloroform	1.0	1.0	< LOQ	Cyclohexane	3880	10	< LOQ
Dimethyl sulfoxide (DMSO)	5000	25	< LOQ	Ethanol	500	10	< LOQ
Ethyl acetate	400	10	< LOQ	Ethyl benzene	70	10	< LOQ
Ethyl ether	500	10	< LOQ	Ethyl formate	5000	500	< LOQ
Ethylene glycol	620	200	< LOQ	Ethylene oxide	1.0	1.0	< LOQ
Formic acid	5000	250	< LOQ	Hexanes	10	10	< LOQ
Isobutyl acetate	5000	500	< LOQ	Isopropyl acetate	310	10	< LOQ
Isopropylbenzene (Cumene)	70	30	< LOQ	Methanol	250	10	< LOQ
Methyl acetate	500	500	< LOQ	Methyl-t-butyl ether	5000	500	< LOQ
Methylene chloride	1.0	1.0	< LOQ	Methylisobutylketone	4500	500	< LOQ
Methylpropane (Isobutane)	500	50	< LOQ	n-Butane	500	10	< LOQ
n-Heptane	500	10	< LOQ	n-Hexane	10	10	< LOQ
n-Pentane	500	10	< LOQ	n-Propanol	250	10	< LOQ
N,N-Dimethylacetamide	1090	10	< LOQ	N,N-Dimethylformamide	880	10	< LOQ
Pentanes	750	10	< LOQ	Propane	500	25	< LOQ
Propyl acetate	500	500	< LOQ	Pyridine	100	10	< LOQ
Sulfolane	160	50	< LOQ	Tetrahydrofuran	250	10	< LOQ
Toluene	150	10	< LOQ	Total Residual Solvents	5000	5000	< LOQ
Total Xylenes	150	10	< LOQ	Total Xylenes and Ethyl benzene	430	20	< LOQ
Trichloroethylene	1.0	1.0	< LOQ	Triethylamine	5000	500	< LOQ

Reviewed by Graham Wiklund

Date: 04/02/2024

Disclaimer:

This Certificate of Analysis contains results provided by ISO 17025 certified contract laboratories external to True Terpenes, as well as results determined by validated method in True Terpenes' internal laboratory. This document does not relieve the purchaser from any responsibility for conducting their own tests in order to verify the suitability of this product for their application and to comply with all relevant legal requirements for any goods into which this product is incorporated. True Terpenes certifies that this product is not derived from cannabis nor does it contain any cannabinoids or other cannabis-derived extracts. The "max allowed" limits in this Certificate of Analysis are reflective of True Terpenes' internal specifications and may not be inclusive of all compound regulations in your region for your finished product type.

The Recommended Use By Date is based on a representative study which has shown stability of color, odor, solvents, and terpene profile throughout the defined period under advised storage conditions. Addition of our product as an ingredient at any point until the recommended use by date should provide a consistent experience. This date is guidance based on optimum storage conditions; exposure to oxygen, light, heat, extreme cold, or other unanticipated conditions may result in degradation of the terpenes prior to the end of the stated recommended use by date. Any directions on the product label to refrigerate during storage should be followed. Botanically derived and/or synthetic compounds found in this product may contain trace compounds which can potentially result in a slight variance between lots.

PRODUCT SPECIFICATIONS

IDENTIFICATION:

PRODUCT NAME: Goji OG

PRODUCT DESIGNATION: Proprietary Terpene Blend - Terpene Strain Profile

TT PRODUCT #: TTP-PN-GJI

CAS #: Mixture

EC #: Mixture

PARAMETER:	SPECIFICATION:
APPEARANCE:	Clear, Light Yellow Liquid
ODOR:	Citrus, Earth, Wood, Floral
RESIDUAL SOLVENTS:	PASSES TEST**
PESTICIDES:	PASSES TEST**
HEAVY METALS:	PASSES TEST**

Additional Product Information:

Storage Conditions: Stable when stored in its original container securely tightened and away from heat, open flames, sunlight, combustible materials and hot surfaces. Store in a cool, dry, and well-ventilated place.

Comments:

** Specifications are presented in Master Safety Product Specifications ***Form 13-SOP-SPC-026.***

TrueTerpenes.com
(888) 954-8550

SAFETY DATA SHEET

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Goji OG
Terpene Strain Profile

Product Number: TTP-PN-GJI

Other Identifying Product Numbers: TTP-PN-GJI-3840, TTP-PN-GJI-02, TTP-PN-GJI-05, TTP-PN-GJI-120, TTP-PN-GJI-15, TTP-PN-GJI-30, TTP-PN-GJI-480

1.2. Recommended Use and Restrictions on Use

This product is intended for use only by adults 21 or older. For lawful use only. This product is concentrated and should not be used undiluted. Not for use with tobacco or nicotine. Avoid contact with the skin, eyes, wood surfaces, and fabrics. Keep out of reach of children and pets. Consumers should determine and conduct their own safety standards and testing. The United States Food and Drug Administration, Center for Disease Control and Prevention, and multiple state governments are investigating numerous instances of severe respiratory illnesses and deaths associated with the use of vaping products. Symptoms include breathing difficulty, shortness of breath, chest pain, mild to moderate gastrointestinal illness, fever, or fatigue. To date, True Terpenes has not received any evidence confirming that this product has caused any adverse health consequences. The State of Oregon has enacted regulations which would prohibit the use of certain substances in vape applications. None of True Terpenes' products currently contain any such substances. Multiple state governments have enacted laws banning the sale of flavors, including terpenes, in vaping applications; however, these laws are in flux. Do not use this product if you are pregnant, nursing or a person with or at risk of serious health conditions including but not limited to: heart disease, high blood pressure, diabetes, respiratory illness, or a person taking medicine for depression or asthma. Discontinue use and consult your doctor if any adverse reaction occurs. This product is not intended to diagnose, treat, cure or prevent any disease. True Terpenes has not evaluated this product for safe use in e-cigarettes or any vaping application where the product(s) is/are intentionally vaporized and inhaled. Discontinue use of this product upon the earlier of expiration or one year from the date of purchase.

1.3. Details of the Supplier of the Safety Data Sheet

Company: True Terpenes
Address: 8210 NE Mauzey Court

Hillsboro, OR 97124 USA

Telephone: 888-954-8550

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)	800-424-9300
CHEMTREC (International)	1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 2A	H319	P264, P280, P305+P351+P338, P337+P313
Respiratory Sensitizer	Category 1	H334	P261, P285, P304+P341, P342+P311, P501
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Carcinogenicity	Category 2	H351	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 2	H361	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 2	H371	P260, P264, P270, P308+P311, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501
Aspiration Hazard	Category 1	H304	P301+P310, P331, P405, P501
Flammable Liquids	Category 3	H226	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501
Hazardous to the Aquatic Environment (Acute)	Category 1	H400	P273, P391, P501
Hazardous to the Aquatic Environment (Chronic)	Category 1	H410	P273, P391, P501

2.2. GHS Label Elements

Pictograms:

Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks and open flame. No smoking.
P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P341	IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water.).
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical attention.
P337+P313	If eye irritation persists: Get medical attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P362	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number
Limonene	$C_{10}H_{16}$	136.23 g/mol	5989-27-5
Myrcene	$C_{10}H_{16}$	136.23 g/mol	123-35-3
Linalool	$C_{10}H_{18}O$	154.24 g/mol	78-70-6
β-Caryophyllene	$C_{15}H_{24}$	204.35 g/mol	87-44-5
β-Pinene	$C_{10}H_{16}$	136.23 g/mol	127-91-3
Nerolidol	$C_{15}H_{26}O$	222.36 g/mol	7212-44-4
Fenchol	$C_{10}H_{18}O$	154.24 g/mol	1632-73-1
α-Pinene	$C_{10}H_{16}$	136.23 g/mol	80-56-8
α-Terpineol	$C_{10}H_{18}O$	154.24 g/mol	98-55-5
Ocimene	$C_{10}H_{16}$	136.23 g/mol	13877-91-3
Guaiol	$C_{15}H_{26}O$	222.36 g/mol	73003-40-4
α-Bisabolol	$C_{15}H_{26}O$	222.36 g/mol	515-69-5
Humulene	$C_{15}H_{24}$	204.35 g/mol	6753-98-6
Borneol	$C_{10}H_{18}O$	154.24 g/mol	507-70-0
Isopulegol	$C_{10}H_{18}O$	154.24 g/mol	89-79-2
Camphene	$C_{10}H_{16}$	136.23 g/mol	79-92-5
Geraniol	$C_{10}H_{18}O$	154.24 g/mol	106-24-1
Valencene	$C_{15}H_{24}$	204.35 g/mol	4630-07-3
Terpinolene	$C_{10}H_{16}$	136.23 g/mol	586-62-9
Caryophyllene oxide	$C_{15}H_{24}O$	220.35 g/mol	1139-30-6

Exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

Inhalation: IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause skin irritation.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or physician. Dilute immediately with water or milk. Do not induce vomiting. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: May cause skin irritation. INHALATION: May cause irritation. INGESTION: May cause nausea, diarrhea.

4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water.).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Carbon dioxide, dry chemical, alcohol foam, water spray.

5.2. Specific Hazards Arising from the Substance or Mixture

Flammable liquid and vapor. Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials

Remove all sources of ignition. Contain spill. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up in original container with lid securely tightened. Store in a cool dry place away from heat, open flame, sunlight, combustible materials, hot surfaces, and other sources of ignition in a secure, preferably flammable, storage area. As with all chemicals, use PPE and wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Empty containers may be hazardous since they retain product residues.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
β-Pinene (127-91-3)	TLV-TWA	USA	20 ppm TWA (listed under Turpentine and selected monoterpenes)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
α-Pinene (80-56-8)	TLV-TWA	USA	20 ppm TWA (listed under Turpentine and selected monoterpenes)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

Respiratory Protection: In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves, PVA or Nitrile rubber.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn. Chemical resistant gloves, PVA or Nitrile rubber. Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Clear, Light Yellow Liquid
Physical State: Liquid
Odor: Citrus, Earth, Wood, Floral
Odor Threshold: Data not available.
pH: Data not available.
Melting/Freezing Point: Data not available.
Initial Boiling Point/Range: Data not available.
Flash Point: Data not available.
Evaporation Rate: Data not available.
Flammability: Data not available.
Flammability/Explosive Limits: Data not available.
Vapor Pressure: Data not available.
Vapor Density: Data not available.
Relative Density: 0.85 at 25°C
Solubility: Data not available.
Partition Coefficient: Data not available.
Auto-Ignition Temperature: Data not available.
Decomposition Temperature: Data not available.
Viscosity: Data not available.
Explosive Properties: Data not available.
Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

May form flammable/explosive vapour-air mixture.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Direct sunlight, extremely high or low temperatures, heat, sparks, open flame, strong acids and strong bases.

10.4. Hazardous Decomposition Products

Carbon oxides may form upon decomposition.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral (calculated): 3968 mg/kg

Contains ingredients with unknown oral toxicity.

Skin Corrosion and Irritation:

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water.). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

Serious Eye Damage and Irritation:

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

Skin Sensitization:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water.). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Suspected of causing cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Reproductive Toxicity:

Suspected of damaging fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration Hazard:

May be fatal if swallowed and enters airways. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Very toxic to aquatic life. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations. Very toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dispose of contaminated packaging as unused product.

SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 2 mL, 5 mL, 15 mL, 30 mL, 120 mL, 480 mL, 3840 mL

UN Number: UN2319

Proper Shipping Name: Terpene hydrocarbons, n.o.s.

Hazard Class: 3

Packing Group: III

Hazard Label(s):

14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 2 mL, 5 mL, 15 mL, 30 mL, 120 mL, 480 mL, 3840 mL

UN Number: UN2319

Proper Shipping Name: Terpene hydrocarbons, n.o.s.

Hazard Class: 3

Packing Group: III

Hazard Label(s):

14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 2 mL, 5 mL, 15 mL, 30 mL, 120 mL, 480 mL, 3840 mL

UN Number: UN2319

Proper Shipping Name: TERPENE HYDROCARBONS, N.O.S.

Hazard Class: 3

Packing Group: III

Hazard Label(s):

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Not listed.

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Not listed.

15.5. Massachusetts Right-to-Know Substance List

Borneol (CAS # 507-70-0): Present

α-Pinene (CAS # 80-56-8): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Borneol (CAS # 507-70-0): Present

α-Pinene (CAS # 80-56-8): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Borneol (CAS # 507-70-0): sn 0242

Terpinolene (CAS # 586-62-9): flammable - third degree

Terpinolene (CAS # 586-62-9): sn 1785

Limonene (CAS # 5989-27-5): sn 0792

α-Pinene (CAS # 80-56-8): flammable - third degree

α-Pinene (CAS # 80-56-8): sn 0052

15.8. California Proposition 65

Myrcene (CAS # 123-35-3): carcinogen, 3/27/2015

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Geraniol (CAS # 106-24-1): Present (DSL)
Caryophyllene oxide (CAS # 1139-30-6): Present (DSL)
Myrcene (CAS # 123-35-3): Present (DSL)
β-Pinene (CAS # 127-91-3): Present (DSL)
Ocimene (CAS # 13877-91-3): Present (DSL)
Fenchol (CAS # 1632-73-1): Present (DSL)
Valencene (CAS # 4630-07-3): Present (DSL)
Borneol (CAS # 507-70-0): Present (DSL)
α-Bisabolol (CAS # 515-69-5): Present (DSL)
Terpinolene (CAS # 586-62-9): Present (DSL)
Limonene (CAS # 5989-27-5): Present (DSL)
Humulene (CAS # 6753-98-6): Present (NDSL)
Nerolidol (CAS # 7212-44-4): Present (DSL)
Guaiol (CAS # 73003-40-4): Present (DSL)
Linalool (CAS # 78-70-6): Present (DSL)
Camphene (CAS # 79-92-5): Present (DSL)
α-Pinene (CAS # 80-56-8): Present (DSL)
β-Caryophyllene (CAS # 87-44-5): Present (DSL)
Isopulegol (CAS # 89-79-2): Present (DSL)
α-Terpineol (CAS # 98-55-5): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

Geraniol (CAS # 106-24-1): Present
Caryophyllene oxide (CAS # 1139-30-6): Present
Myrcene (CAS # 123-35-3): Present
β-Pinene (CAS # 127-91-3): Present
Ocimene (CAS # 13877-91-3): Present
Fenchol (CAS # 1632-73-1): Present
Valencene (CAS # 4630-07-3): Present
Borneol (CAS # 507-70-0): Present
α-Bisabolol (CAS # 515-69-5): Present
Terpinolene (CAS # 586-62-9): Present
Limonene (CAS # 5989-27-5): Present
Humulene (CAS # 6753-98-6): Present
Nerolidol (CAS # 7212-44-4): Present
Guaiol (CAS # 73003-40-4): Present
Linalool (CAS # 78-70-6): Present
Camphene (CAS # 79-92-5): Present
α-Pinene (CAS # 80-56-8): Present
β-Caryophyllene (CAS # 87-44-5): Present
Isopulegol (CAS # 89-79-2): Present
α-Terpineol (CAS # 98-55-5): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Geraniol (CAS # 106-24-1): 203-377-1
Caryophyllene oxide (CAS # 1139-30-6): 214-519-7
Myrcene (CAS # 123-35-3): 204-622-5
β-Pinene (CAS # 127-91-3): 204-872-5
β-Pinene (CAS # 127-91-3): 245-424-9
Ocimene (CAS # 13877-91-3): 237-641-2
Ocimene (CAS # 13877-91-3): 249-805-0
Fenchol (CAS # 1632-73-1): 216-639-5
Valencene (CAS # 4630-07-3): 225-047-6
Borneol (CAS # 507-70-0): 207-352-6
Borneol (CAS # 507-70-0): 207-353-1
Borneol (CAS # 507-70-0): 208-080-0
α-Bisabolol (CAS # 515-69-5): 208-205-9
α-Bisabolol (CAS # 515-69-5): 246-973-7
Terpinolene (CAS # 586-62-9): 209-578-0
Limonene (CAS # 5989-27-5): 205-341-0
Limonene (CAS # 5989-27-5): 227-813-5
Humulene (CAS # 6753-98-6): 229-816-7
Nerolidol (CAS # 7212-44-4): 230-597-5
Guaiol (CAS # 73003-40-4): 277-198-2
Linalool (CAS # 78-70-6): 201-134-4
Linalool (CAS # 78-70-6): 245-083-6
Camphene (CAS # 79-92-5): 201-234-8
Camphene (CAS # 79-92-5): 209-275-3
α-Pinene (CAS # 80-56-8): 201-291-9
α-Pinene (CAS # 80-56-8): 219-445-9
β-Caryophyllene (CAS # 87-44-5): 201-746-1
Isopulegol (CAS # 89-79-2): 201-940-6
α-Terpineol (CAS # 98-55-5): 202-680-6
α-Terpineol (CAS # 98-55-5): 219-448-5

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water.). Do NOT induce vomiting. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Take off contaminated clothing and wash it before reuse.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

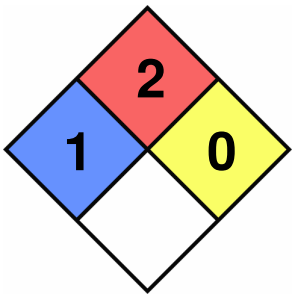
16.3. National Fire Protection Association (NFPA) Rating

Health: 1

Flammability: 2

Reactivity: 0

Special Hazard:



16.4. Document Revision

Last Revision Date: 2023-01-31

DISCLAIMER

WARNING

True Terpenes cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to stay current with respect to applicable laws and regulatory investigations and findings, and to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on knowledge and experience currently available. To date, True Terpenes has not received any evidence confirming that this product has caused any adverse health consequences. The above information relates only to this product and not to its use in combination with any other material or any particular process, and is designed only as guidance for the handling, use, processing, storage, transportation, and disposal. It should not be considered as a guarantee or quality specification. True Terpenes has not evaluated this product for safe use in e-cigarettes or any vaping application where the product(s) is/are intentionally vaporized and inhaled. True Terpenes has performed no testing on these products in e-cig/vaping applications. Applying heat to a compound or mixture of compounds may promote New Product formation by thermal degradation. New Products could include harmful or potentially harmful compounds such as aldehydes, ketones, quinones, organic acids, and aromatic hydrocarbons (including benzene). It is the sole responsibility of the individual(s) purchasing this product to assess its safety in the final application. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the handling, use, processing, storage, transportation, and disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of True Terpenes' knowledge-based upon current information as of the publish date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own uses, processes, and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.