

CERTIFICATE OF ANALYSIS

DATE ISSUED: 10/23/2023



IDENTIFICATION:

PRODUCT NAME: Alpha Pinene
PRODUCT DESIGNATION: Isolate
TT PRODUCT #: TTI-APNE
LOT #: 23021707
RECOMMENDED USE BY DATE: September 2025
CAS #: 80-56-8
EC #: 201-291-9
MANUFACTURING DATE: 2/17/2023

PARAMETER:	SPECIFICATION:	RESULT:
APPEARANCE:	Colorless to Pale Yellow Liquid	PASSES VISUALLY
ODOR:	Pine	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.

Reviewed by Graham Wiklund

Date: 10/23/2023

Disclaimer:

This Certificate of Analysis contains specifications and results provided by contract laboratories external to True Terpenes. This document does not relieve the purchaser from conducting their own tests in order to verify the suitability of this product for its application and to comply with all relevant legal requirements for any goods into which this product is incorporated. Botanically derived and/or synthetic compounds found in this product may contain trace compounds which can potentially result in a slight variance between lots. True Terpenes certifies that this product is not derived from cannabis nor does it contain any cannabinoids or other cannabis-derived extracts. The limits in this Certificate of Analysis may not be inclusive of all compound regulations in your region.

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Heavy Metal Test Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Arsenic	0.2	0.0929	< LOQ	Cadmium	0.2	0.0929	< LOQ
Lead	0.5	0.0929	< LOQ	Mercury	0.1	0.0465	< LOQ

Pesticide Test Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Abamectin	0.07	0.07	< LOQ	Acephate	0.05	0.02	< LOQ
Acequinocyl	0.05	0.025	< LOQ	Acetamiprid	0.05	0.05	< LOQ
Aldicarb	0.1	0.1	< LOQ	Allethrin	0.1	0.1	< LOQ
Azadirachtin	0.5	0.5	< LOQ	Azoxystrobin	0.01	0.01	< LOQ
Benzovindiflupyr	0.01	0.01	< LOQ	Bifenazate	0.01	0.01	< LOQ
Bifenthrin	0.1	0.1	< LOQ	Boscalid	0.01	0.01	< LOQ
Buprofezin	0.01	0.01	< LOQ	Captan	0.7	0.7	< LOQ
Carbaryl	0.025	0.025	< LOQ	Carbofuran	0.01	0.01	< LOQ
Chlorantraniliprole	0.2	0.01	< LOQ	Chlordane	0.1	0.1	< LOQ
Chlorfenapyr	0.1	0.1	< LOQ	Chlorpyrifos	0.01	0.01	< LOQ
Clofentezine	0.01	0.01	< LOQ	Clothianidin	0.025	0.025	< LOQ
Coumaphos	0.01	0.01	< LOQ	Cyantraniliprole	0.01	0.01	< LOQ
Cyfluthrin	0.4	0.4	< LOQ	Cypermethrin	1	0.3	< LOQ
Cyprodinil	0.01	0.01	< LOQ	Daminozide	0.05	0.05	< LOQ
Deltamethrin	0.5	0.5	< LOQ	Diazinon	0.1	0.01	< LOQ
Dichlorvos	0.05	0.05	< LOQ	Dimethoate	0.01	0.01	< LOQ
Dimethomorph	2	0.05	< LOQ	Dinotefuran	0.05	0.05	< LOQ
Dodemorph	0.05	0.05	< LOQ	Endosulfan Sulfate	2.5	0.05	< LOQ
α -Endosulfan	2.5	0.05	< LOQ	β -Endosulfan	2.5	0.05	< LOQ
Ethoprophos	0.01	0.01	< LOQ	Etofenprox	0.01	0.01	< LOQ
Etoxazole	0.1	0.01	< LOQ	Etridiazole	0.15	0.05	< LOQ
Fenhexamid	0.1	0.1	< LOQ	Fenoxycarb	0.01	0.01	< LOQ

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Pesticide Test Results *Continued* (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Fenpyroximate	0.1	0.02	< LOQ	Fensulfothion	0.01	0.01	< LOQ
Fenthion	0.01	0.01	< LOQ	Fenvalerate	0.2	0.2	< LOQ
Fipronil	0.01	0.01	< LOQ	Flonicamid	0.025	0.025	< LOQ
Fludioxonil	0.01	0.01	< LOQ	Fluopyram	0.01	0.01	< LOQ
Hexythiazox	0.1	0.01	< LOQ	Imazalil	0.01	0.01	< LOQ
Imidacloprid	0.01	0.01	< LOQ	Iprodione	0.5	0.5	< LOQ
Kinoprene	1.25	0.05	< LOQ	Kresoxim-methyl	0.1	0.01	< LOQ
Malathion	0.01	0.01	< LOQ	Metalaxyl	0.01	0.01	< LOQ
Methiocarb	0.01	0.01	< LOQ	Methomyl	0.025	0.025	< LOQ
Methoprene	1	1	< LOQ	Mevinphos	0.025	0.025	< LOQ
MGK-264	0.2	0.05	< LOQ	Myclobutanil	0.01	0.01	< LOQ
Naled	0.1	0.1	< LOQ	Novaluron	0.025	0.025	< LOQ
Oxamyl	0.5	0.5	< LOQ	Paclobutrazol	0.01	0.01	< LOQ
Parathion-Methyl	0.03	0.03	< LOQ	Pentachloronitrobenzene (Quintozene)	0.02	0.02	< LOQ
Permethrin	0.1	0.04	< LOQ	Phenothrin	0.025	0.025	< LOQ
Phosmet	0.05	0.01	< LOQ	Piperonyl butoxide	1.25	0.2	< LOQ
Pirimicarb	0.01	0.01	< LOQ	Prallethrin	0.1	0.05	< LOQ
Propiconazole	0.1	0.01	< LOQ	Propoxur	0.01	0.01	< LOQ
Pyraclostrobin	0.01	0.01	< LOQ	Pyrethrins	0.5	0.025	< LOQ
Pyridaben	0.02	0.02	< LOQ	Resmethrin	0.05	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	0.025	0.025	< 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				

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Residual Solvent Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
1-Butanol	5000	500	< LOQ	1-Pentanol	5000	500	< LOQ
1,2-Dichloroethane	1	1	< LOQ	1,2-Dimethoxyethane	50	50	< LOQ
1,4-Dioxane	380	100	< LOQ	2-Butanol	5000	200	< LOQ
2-Ethoxyethanol	160	30	< LOQ	2-Methyl-1-Propanol	500	500	< LOQ
2-Methylbutane (Isopentane)	600	200	< LOQ	2-Methylpentane	50	30	< LOQ
2-Propanol (IPA)	500	200	< LOQ	2,2-Dimethylbutane	50	30	< LOQ
2,2-Dimethylpropane (Neopentane)	750	200	< LOQ	2,3-Dimethylbutane	50	30	< LOQ
3-Methylpentane	50	30	< LOQ	Acetone	750	200	< LOQ
Acetonitrile	100	100	< LOQ	Benzene	1	1	< LOQ
Butanes	500	400	< LOQ	Chloroform	1	1	< LOQ
Cyclohexane	470	200	< LOQ	Dimethyl Sulfoxide	5000	500	< LOQ
Ethanol	1000	200	< LOQ	Ethyl Acetate	400	200	< LOQ
Ethyl Benzene	200	200	< LOQ	Ethyl Ether	500	200	< LOQ
Ethylene Glycol	200	200	< LOQ	Ethylene Oxide	1	1	< LOQ
Hexanes	150	150	< LOQ	Isopropylbenzene (Cumene)	70	30	< LOQ
Methanol	250	200	< LOQ	Methylene Chloride	1	1	< LOQ
Methylpropane (Isobutane)	300	200	< LOQ	n-Butane	500	200	< LOQ
n-Heptane	500	200	< LOQ	n-Hexane	50	30	< LOQ
n-Pentane	750	200	< LOQ	N,N-Dimethylacetamide	200	200	< LOQ
N,N-Dimethylformamide	200	200	< LOQ	Pentanes	750	600	< LOQ
Propane	500	200	< LOQ	Propyl Acetate	5000	500	< LOQ
Pyridine	200	50	< LOQ	Tetrahydrofuran	720	100	< LOQ
Toluene	150	100	< LOQ	Total Residual Solvents	5000	5000	< LOQ
Total Xylenes	400	400	< LOQ	Total Xylenes and Ethyl Benzene	600	600	< LOQ
Trichloroethylene	1	1	< LOQ				