

CERTIFICATE OF ANALYSIS



IDENTIFICATION:

PRODUCT NAME: Alpha Pinene
PRODUCT DESIGNATION: Isolate
TT PRODUCT #: TTI-APNE
LOT #: T009198
CAS #: 80-56-8
EC #: 201-291-9

PARAMETER:	SPECIFICATION:	RESULT:
APPEARANCE:	Colorless to pale yellow liquid	Colorless to pale yellow liquid
ODOR:	Pine	Pine
ASSAY:	90.0-100.0 %	97.9 %

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.

TRACE CONTAMINANT LEVELS:

Component: Alpha-pinene

Test Type: Heavy Metals

Contaminant Name	Max. Allowed (ppm)	Test Result	Contaminant Name	Max. Allowed (ppm)	Test Result
Arsenic	0.2	< 0.0436 mg/kg	Cadmium	0.2	< 0.0436 mg/kg
Lead	0.5	< 0.0436 mg/kg	Mercury	0.1	< 0.0218 mg/kg

Component: Alpha-pinene

Test Type: Pesticide

Contaminant Name	Max. Allowed (ppm)	Test Result	Contaminant Name	Max. Allowed (ppm)	Test Result
Abamectin	0.07	< 0.070 mg/kg	Acephate	0.1	< 0.10 mg/kg
Acequinocyl	0.1	< 0.10 mg/kg	Acetamiprid	0.1	< 0.10 mg/kg
Aldicarb	0.4	< 0.10 mg/kg	Azoxystrobin	0.02	< 0.020 mg/kg
Bifenazate	0.02	< 0.020 mg/kg	Bifenthrin	0.1	< 0.10 mg/kg
Boscalid	0.1	< 0.10 mg/kg	Captan	0.7	< 0.70 mg/kg

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Component: Alpha-pinene

Test Type: Pesticide

Contaminant Name	Max. Allowed (ppm)	Test Result	Contaminant Name	Max. Allowed (ppm)	Test Result
Carbaryl	0.2	< 0.20 mg/kg	Carbofuran	0.2	< 0.10 mg/kg
Chlorantraniliprole	0.2	< 0.20 mg/kg	Chlordane	0.1	< 0.10 mg/kg
Chlorfenapyr	0.2	< 0.10 mg/kg	Chlorpyrifos	0.2	< 0.10 mg/kg
Clofentezine	0.1	< 0.10 mg/kg	Coumaphos	0.1	< 0.10 mg/kg
Cyfluthrin	1	< 1.0 mg/kg	Cypermethrin	1	< 1.0 mg/kg
Daminozide	0.10	< 0.10 mg/kg	DDVP (Dichlorvos)	0.1	< 0.10 mg/kg
Diazinon	0.1	< 0.10 mg/kg	Dimethoate	0.2	< 0.10 mg/kg
Dimethomorph	2	< 2.0 mg/kg	Ethoprophos	0.2	< 0.10 mg/kg
Etofenprox	0.4	< 0.10 mg/kg	Etoxazole	0.1	< 0.10 mg/kg
Fenhexamid	0.1	< 0.10 mg/kg	Fenoxycarb	0.2	< 0.10 mg/kg
Fenpyroximate	0.1	< 0.10 mg/kg	Fipronil	0.4	< 0.10 mg/kg
Fonicamid	0.1	< 0.10 mg/kg	Fludioxonil	0.1	< 0.10 mg/kg
Hexythiazox	0.1	< 0.10 mg/kg	Imazalil	0.10	< 0.10 mg/kg
Imidacloprid	0.02	< 0.020 mg/kg	Kresoxim-methyl	0.1	< 0.10 mg/kg
Malathion	0.2	< 0.20 mg/kg	Metalaxyl	0.2	< 0.20 mg/kg
Methiocarb	0.2	< 0.10 mg/kg	Methomyl	0.4	< 0.40 mg/kg
Methyl-Parathion	0.2	< 0.10 mg/kg	Mevinphos	0.1	< 0.10 mg/kg
MGK-264	0.2	< 0.20 mg/kg	Myclobutanil	0.04	< 0.040 mg/kg
Naled	0.2	< 0.10 mg/kg	Oxamyl	0.5	< 0.50 mg/kg
Paclobutrazol	0.10	< 0.10 mg/kg	Pentachloronitrobenzene	0.1	< 0.10 mg/kg
Permethrins	0.04	< 0.040 mg/kg	Phosmet	0.1	< 0.10 mg/kg
Piperonyl Butoxide	2	< 2.0 mg/kg	Prallethrin	0.1	< 0.10 mg/kg
Propiconazole	0.1	< 0.10 mg/kg	Propoxur	0.2	< 0.10 mg/kg
Pyrethrins	0.5	< 0.50 mg/kg	Pyridaben	0.1	< 0.10 mg/kg
Spinetoram	0.1	< 0.10 mg/kg	Spinosad	0.06	< 0.060 mg/kg
Spiromesifen	0.03	< 0.030 mg/kg	Spirotetramat	0.02	< 0.020 mg/kg
Spiroxamine	0.4	< 0.10 mg/kg	Tebuconazole	0.01	< 0.010 mg/kg
Thiacloprid	0.2	< 0.10 mg/kg	Thiamethoxam	0.2	< 0.20 mg/kg
Trifloxystrobin	0.1	< 0.10 mg/kg			

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Component: Alpha-Pinene, Natural

Test Type: Residual Solvent

Contaminant Name	Max. Allowed (ppm)	Test Result	Contaminant Name	Max. Allowed (ppm)	Test Result
1,2-Dichloroethane	1.0	< 1 ppm	1,4-Dioxane	380	< 3 ppm
1-Butanol	5000	< 10 ppm	1-Pentanol	5000	< 25 ppm
1-Propanol	5000	< 3 ppm	2,2-Dimethylbutane	50	< 10 ppm
2,3-Dimethylbutane	50	< 50 ppm	2-Butanol	5000	< 5 ppm
2-Butanone	5000	< 3 ppm	2-Ethoxyethanol	160	< 50 ppm
2-Methylbutane	750	< 5 ppm	2-Methylpentane	50	< 5 ppm
2-Methylpropane (Isobutane)	800	< 10 ppm	2-Propanol (IPA)	500	< 10 ppm
3-Methylpentane	50	< 3 ppm	Acetone	750	41 ppm
Acetonitrile	60	< 5 ppm	Benzene	1.0	< 0.5 ppm
Butane	500	< 10 ppm	Chloroform	1.0	< 1 ppm
Cumene (Isopropyl Benzene)	70	< 1 ppm	Cyclohexane	3880	< 3 ppm
Dimethyl Sulfoxide (DMSO)	5000	< 400 ppm	Ethanol	1000	54 ppm
Ethyl Acetate	400	< 5 ppm	Ethyl Ether	500	< 1 ppm
Ethylbenzene	150	< 1 ppm	Ethylene Glycol	620	< 400 ppm
Ethylene Oxide	1.0	< 1 ppm	Heptane	500	< 3 ppm
Isopropyl Acetate	60	< 3 ppm	m-Xylene and p-Xylene	150	< 2 ppm
Methanol	250	< 3 ppm	Methylene Chloride	1.0	< 0.5 ppm
N,N-Dimethylacetamide	880	< 50 ppm	N,N-Dimethylformamide	880	< 50 ppm
n-Hexane	50	< 3 ppm	Naphtha	400	< 181 ppm
Neopentane	750	< 3 ppm	o-Xylene	150	< 3 ppm
Petroleum Ether	400	< 181 ppm	Propane	500	< 50 ppm
Pyridine	200	< 25 ppm	Tetrahydrofuran	720	< 1 ppm
Toluene	150	13 ppm	Total Residual Solvents	5000	< 1327 ppm
Trichloroethylene	1.0	< 1 ppm	Xylenes	150	< 6 ppm

Branston Mefferd
Quality Control

Disclaimer: This Certificate of Analysis contains the results provided by outside contracting laboratory. This Certificate of Analysis does not relieve the purchaser from undertaking their own tests in order to assure 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. True Terpenes certifies that all of our terpene products are not derived from cannabis nor do they contain any cannabinoids or other hemp or cannabis derived extracts.