

# CERTIFICATE OF ANALYSIS



## IDENTIFICATION:

**PRODUCT NAME:** Limonene  
**PRODUCT DESIGNATION:** Isolate  
**TT PRODUCT ID:** TTI-LIMO  
**LOT #:** 23011804  
**INTENDED FOR USE BY:** January 2024  
**CAS #:** 5989-27-5  
**EC #:** 227-813-5  
**MANUFACTURING DATE:** 10/21/2022

PARAMETER:	SPECIFICATION:	RESULT:
<b>APPEARANCE:</b>	Colorless to Pale Yellow Liquid	Colorless to Pale Yellow Liquid
<b>ODOR:</b>	Fresh, Light, Mild Orange	Fresh, Light, Mild Orange
<b>RESIDUAL SOLVENTS:</b>	PASSES TEST	PASSES TEST
<b>PESTICIDES:</b>	PASSES TEST	PASSES TEST
<b>HEAVY METALS:</b>	PASSES TEST	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.

## TRACE CONTAMINANT LEVELS:

Test Type: Heavy Metals

Contaminant Name	Max Allowed (ppm)	Test Result	Contaminant Name	Max Allowed (ppm)	Test Result
Arsenic	0.2	<0.0417 ppm	Cadmium	0.2	<0.0417 ppm
Lead	0.5	<0.0417 ppm	Mercury	0.1	<0.0208 ppm

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## Test Type: Pesticide

Contaminant Name	Max Allowed (ppm)	Test Result	Contaminant Name	Max Allowed (ppm)	Test Result
Abamectin	0.07	<0.070 ppm	Acephate	0.05	<0.020 ppm
Acequinocyl	0.1	<0.025 ppm	Acetamiprid	0.05	<0.050 ppm
Aldicarb	0.1	<0.100 ppm	Azoxystrobin	0.01	<0.010 ppm
Allethrin	0.1	<0.100 ppm	Azadirachtin	0.5	< 0.500 ppm
Bifenazate	0.01	<0.010 ppm	Bifenthrin	0.1	<0.100 ppm
Benzovindiflupyr	0.01	<0.010 ppm	Buprofezin	0.01	<0.010 ppm
Boscalid	0.01	<0.010 ppm	Captan	0.7	<0.700 ppm
Carbaryl	0.025	<0.025 ppm	Carbofuran	0.01	<0.010 ppm
Chlorantraniliprole	0.2	<0.010 ppm	Chlordane	0.1	<0.100 ppm
Chlorfenapyr	0.1	<0.100 ppm	Chlorpyrifos	0.01	<0.010 ppm
Clofentezine	0.01	<0.010 ppm	Coumaphos	0.01	<0.010 ppm
Clothianidin	0.025	<0.025 ppm	Cyantraniliprole	0.01	<0.010 ppm
Cyfluthrin	0.4	<0.400 ppm	Cypermethrin	1	<0.300 ppm
Cyprodinil	0.01	<0.010 ppm	Deltamethrin	0.5	<0.500 ppm
Daminozide	0.05	<0.050 ppm	DDVP (Dichlorvos)	0.05	<0.050 ppm
Diazinon	0.1	<0.010 ppm	Dimethoate	0.01	<0.010 ppm
Dinotefuran	0.05	<0.050 ppm	Dodemorph	0.05	<0.050 ppm
Dimethomorph	2	<0.050 ppm	Ethoprophos	0.01	<0.010 ppm
Etofenprox	0.01	<0.010 ppm	Etoxazole	0.1	<0.010 ppm
Endosulfan Sulfate	2.5	<0.050 ppm	Endosulfan Alpha	2.5	<0.050 ppm

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Endosulfan Beta	2.5	<0.050 ppm	Etridiazole	0.15	<0.050 ppm
Fenhexamid	0.1	<0.100 ppm	Fenoxycarb	0.01	<0.010 ppm
Fenpyroximate	0.1	<0.020 ppm	Fipronil	0.01	<0.010 ppm
Fensulfotion	0.01	<0.010 ppm	Fenthion	0.01	<0.010 ppm
Fenvalerate	0.2	<0.200 ppm	Fluopyram	0.01	<0.010 ppm
Flonicamid	0.025	<0.025 ppm	Fludioxonil	0.01	<0.010 ppm
Hexythiazox	0.1	<0.010 ppm	Imazalil	0.01	<0.010 ppm
Imidacloprid	0.01	<0.010 ppm	Kresoxim-methyl	0.1	<0.010 ppm
Iprodione	0.5	<0.500 ppm	Kinoprene	1.25	<0.050 ppm
Malathion	0.01	<0.010 ppm	Metalaxyl	0.01	<0.010 ppm
Methiocarb	0.01	<0.010 ppm	Methomyl	0.025	<0.025 ppm
Methyl-Parathion	0.03	<0.030 ppm	Mevinphos	0.025	<0.025 ppm
Methoprene	1.0	<1.00 ppm	Myclobutanil	0.01	<0.010 ppm
MGK-264	0.2	<0.050 ppm	Oxamyl	0.5	<0.500 ppm
Naled	0.1	<0.100 ppm	Pentachloronitrobenzene	0.1	<0.100 ppm
Novaluron	0.025	<0.025 ppm	Phosmet	0.05	<0.010 ppm
Paclobutrazol	0.01	<0.010 ppm	Primicarb	0.01	<0.010 ppm
Permethrins	0.1	<0.040 ppm	Prallethrin	0.1	<0.050 ppm
Phenothrin	0.025	<0.025 ppm	Propoxur	0.01	<0.010 ppm
Piperonyl Butoxide	1.25	<0.200 ppm	Pyridaben	0.02	<0.020 ppm
Propiconazole	0.1	<0.010 ppm	Resmethrin	0.05	<0.020 ppm
Pyrethrins	0.5	<0.025 ppm	Spinosad	0.01	<0.010 ppm
Pyraclostrobin	0.01	<0.010 ppm	Spirotetramat	0.01	<0.010 ppm

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Spinetoram	0.01	<0.010 ppm	Tebuconazole	0.01	<0.010 ppm
Spirodiclofen	0.25	<0.250 ppm	Teflubenzuron	0.025	<0.025 ppm
Spiromesifen	0.03	<0.030 ppm	Tetramethrin	0.05	<0.050 ppm
Spiroxamine	0.01	<0.010 ppm	Thiamethoxam	0.01	<0.010 ppm
Tebufenozide	0.01	<0.010 ppm	Trifloxystrobin	0.01	<0.010 ppm
Tetrachlorvinphos	0.01	<0.010 ppm	Thiacloprid	0.01	<0.010 ppm
Thiophanate-methyl	0.03	<0.030 ppm			

## Test Type: Residual Solvent

Contaminant Name	Max Allowed (ppm)	Test Result	Contaminant Name	Max Allowed (ppm)	Test Result
1-Butanol	5000	<500 ppm	1-Pentanol	5000	<500 ppm
1,2-Dichloroethane	1.0	<1.00 ppm	1,4-Dioxane	380	<100 ppm
2-Butanol	5000	<200 ppm	2-Ethoxyethanol	160	<30.0 ppm
2-Methylpentane	50	<30.0 ppm	2-Methylbutane	750	<200 ppm
2,2-Dimethylbutane	50	<30.0 ppm	2-Propanol (IPA)	500	<200 ppm
2,3-Dimethylbutane	50	<30.0 ppm	3-Methyl-(1)-Butanol	5000	<500 ppm
3-Methylpentane	50	<30.0 ppm	Acetone	750	<200 ppm
Acetonitrile	100	<100 ppm	Anisole	5000	<500 ppm
Benzene	1.0	<1.00 ppm	Butanes (sum)	500	<400 ppm
Butyl Acetate	5000	<500 ppm	Chloroform	1.0	<1.00 ppm
Cyclohexane	3880	<200 ppm	Ethanol	1000	<200 ppm
DMSO	5000	<500 ppm	Ethyl Benzene	200	<200 ppm
Ethyl Acetate	400	<200 ppm	Ethyl Formate	5000	<500 ppm
Ethyl Ether	500	<200 ppm	Ethylene Oxide	1.0	<1.00 ppm
Ethylene Glycol	620	<200 ppm	Isobutyl Acetate	5000	<500 ppm
Isopropyl Acetate	200	<200 ppm	Isopropylbenzene (Cumene)	70	<30.0 ppm
Methyl-t-butyl ether	5000	<500 ppm	Methanol	250	<200 ppm
Methylene Chloride	1.0	<1.00 ppm	Methylacetate	5000	<500 ppm
n-Hexane	50	<30.0 ppm	Methylethylketone	5000	<500 ppm

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Pentanes (sum)	750	<600 ppm	Methylpropane	300	<200 ppm
Propyl Acetate	5000	<500 ppm	Triethylamine	5000	<500 ppm
Pyridine	200	<50.0 ppm	N,N-dimethylformamide	880	<200 ppm
N,N-dimethylacetamide	880	<200 ppm	n-Heptane	500	<200 ppm
Toluene	150	<100 ppm	n-Pentane	750	<200 ppm
Total Xylenes	200	<200 ppm	Propane	500	<200 ppm
Trichloroethylene	1.0	<1.00 ppm	Total Residual Solvents	5000	<5000 ppm
Tetrahydrofuran	720	<100 ppm			

Quality Control performed by Alden Moore 1/18/2023

**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. The limits in this certificate of analysis document may not be inclusive of all compound regulations in Alaska.