CERTIFICATE OF ANALYSIS

8210 NE Mauzey Ct, Hillsboro, OR 97124 | (888) 954-8550 | **trueterpenes.com**

TRUE TERPENES

PRODUCT IDENTIFICATION

PRODUCT NAME	Humulene
PRODUCT CATEGORY	Isolate
PRODUCT #	TTI-HUMU
LOT #	26071411

PRODUCT INFORMATION

STORAGE CONDITIONS:	Refer to Product Specifications sheet for storage conditions.
CAS #	6753-98-6
EC #	229-816-7
DENSITY*	0.89 g/mL
MANUFACTURING DATE	14-Jul-2026
PRODUCT RELEASE DATE	14-Jul-2026
RECOMMENDED USE BY DATE (RETEST DATE)	31-Jul-2027

PARAMETER	SPECIFICATION	RESULT
APPEARANCE	COLORLESS TO GREENISH-YELLOW TO DARK YELLOW LIQUID	PASSES VISUALLY
ODOR	WOODY, LIGHT, EARTHY	PASSES SENSORY
PURITY	55 - 100 %	93.32 %
HEAVY METALS	PASSES TESTING	PASSES TESTING
PESTICIDES	PASSES TESTING	PASSES TESTING
RESIDUAL SOLVENTS	PASSES TESTING	PASSES TESTING

Heavy Metal Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Arsenic	0.11	0.0903	< LOQ	Cadmium	0.11	0.0903	< LOQ
Lead	0.11	0.0903	< LOQ	Mercury	0.06	0.0451	< 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	0.025	0.02	< LOQ	Acetamiprid	0.05	0.02	< LOQ
Aldicarb	0.1	0.1	< LOQ	Allethrin	0.1	0.1	< LOQ
Atrazine	0.025	0.02	< LOQ	Azadirachtin	0.5	0.2	< 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	0.02	< LOQ
Carbofuran	0.01	0.01	< LOQ	Chlorantraniliprole	0.01	0.01	< LOQ
Chlordane (cis+trans)	0.1	0.1	< LOQ	Chlorfenapyr	0.1	0.05	< LOQ
Chlormequat	0.01	0.01	< LOQ	Chlorpyrifos	0.01	0.01	< LOQ
Clofentezine	0.01	0.01	< LOQ	Clothianidin	0.025	0.02	< LOQ
Coumaphos	0.01	0.01	< LOQ	Cyantraniliprole	0.01	0.01	< LOQ
Cyfluthrin	0.4	0.2	< LOQ	Cyhalothrin, lambda	0.25	0.2	< LOQ
Cypermethrin	0.3	0.2	< LOQ	Cyprodinil	0.01	0.01	< LOQ
Daminozide	0.05	0.05	< LOQ	Deltamethrin	0.5	0.2	< LOQ
Diazinon	0.01	0.01	< LOQ	Dichlorvos	0.05	0.05	< LOQ

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Pesticide Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
Dimethoate	0.01	0.01	< LOQ	Dimethomorph	0.05	0.05	< LOQ
Dinotefuran	0.05	0.05	< LOQ	Diuron	0.125	0.1	< LOQ
Dodemorph	0.05	0.05	< LOQ	Endosulfan sulfate	0.05	0.05	< LOQ
Endosulfan, alpha-	0.1	0.05	< LOQ	Endosulfan, beta-	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	0.03	< LOQ
Fenhexamid	0.1	0.1	< 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 (sum)	0.2	0.1	< LOQ
Fipronil	0.01	0.01	< LOQ	Flonicamid	0.025	0.02	< 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	0.5	0.2	< LOQ
Kinoprene	0.05	0.1	< 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	0.025	0.02	< LOQ
Methoprene	1	0.2	< LOQ	Mevinphos	0.025	0.02	< LOQ
MGK-264	0.05	0.05	< LOQ	Myclobutanil	0.01	0.01	< LOQ
Naled	0.1	0.1	< LOQ	Novaluron	0.025	0.02	< LOQ
Oxamyl	0.5	0.2	< LOQ	Paclobutrazole	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	0.025	0.025	< LOQ
Phosmet	0.01	0.01	< LOQ	Piperonyl butoxide	0.2	0.2	< LOQ
Pirimicarb	0.01	0.01	< LOQ	Prallethrin	0.05	0.05	< LOQ
Pronamide (Propyzamid)	0.01	0.01	< LOQ	Propargite	0.01	0.01	< LOQ
Propiconazole	0.01	0.01	< LOQ	Pymetrozine	0.02	0.02	< LOQ
Propoxur	0.01	0.01	< LOQ	Pyraclostrobin	0.01	0.01	< LOQ
Pyrethrins (total)	0.025	0.025	< LOQ	Pyridaben	0.02	0.02	< LOQ
Pyrimethanil	0.02	0.02	< LOQ	Pyriproxyfen	0.01	0.01	< LOQ
Resmethrin	0.02	0.02	< LOQ	Spinetoram	0.01	0.01	< LOQ
Spinosad	0.01	0.01	< LOQ	Spirodiclofen	0.25	0.2	< 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	0.02	< LOQ
Tetrachlorvinphos	0.01	0.01	< LOQ	Tetramethrin	0.05	0.05	< LOQ
Thiabendazole	0.02	0.02	< 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	500	< LOQ	1-Pentanol	5000	500	< LOQ
1,1-Dichloroethene	8	1	< LOQ	1,1,1-Trichloroethane	450	1	< LOQ
1,2-Dichloroethane	1	1	< LOQ	1,2-Dimethoxyethane	100	50	< LOQ
1,4-Dioxane	380	100	< LOQ	2-Butanol	5000	200	< LOQ
2-Ethoxyethanol	160	30	< LOQ	2-methyl-1-propanol	5000	500	< LOQ
2-Methylbutane (Isopentane)	750	200	< LOQ	2-Methylpentane	30	30	< LOQ

Date Issued: 14-Jul-2026

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Residual Solvent Results (ppm)

Analyte	Max Allowed	LOQ	Result	Analyte	Max Allowed	LOQ	Result
2-Propanol (IPA)	500	200	< LOQ	2,2-Dimethylbutane	30	30	< LOQ
2,2-Dimethylpropane (neo-pentane)	750	200	< LOQ	2,3-Dimethylbutane	30	30	< LOQ
3-Methyl-1-Butanol	500	500	< LOQ	3-Methylpentane	30	30	< LOQ
Acetone	500	200	< LOQ	Acetonitrile	100	100	< LOQ
Anisole	5000	500	< LOQ	Benzene	1	1	< LOQ
Butanes (sum)	500	400	< LOQ	Carbon Tetrachloride	4	1	< LOQ
Chlorobenzene	360	1	< LOQ	Chloroform	1	1	< LOQ
Cyclohexane	300	200	< LOQ	Dimethyl sulfoxide	5000	500	< LOQ
Ethanol	500	200	< LOQ	Ethyl acetate	400	200	< LOQ
Ethyl benzene	200	200	< LOQ	Ethyl ether	500	200	< LOQ
Ethyl Formate	1000	500	< LOQ	Ethylene glycol	620	200	< LOQ
Ethylene oxide	1	1	< LOQ	Hexanes (sum)	150	150	< LOQ
Isopropyl acetate	310	200	< LOQ	Isopropylbenzene (Cumene)	70	30	< LOQ
Methanol	250	200	< LOQ	Methyl acetate	500	500	< LOQ
Methyl-t-butyl ether	1000	500	< LOQ	Methylene chloride	1	1	< LOQ
Methylethylketone	500	500	< LOQ	Methylisobutylketone	4500	500	< LOQ
Methylpropane (Isobutane)	500	200	< LOQ	n-Butane	500	200	< LOQ
n-Heptane	500	200	< LOQ	n-Hexane	30	30	< LOQ
n-Pentane	500	200	< LOQ	n-Propanol	500	500	< LOQ
N,N-dimethylacetamide	1090	200	< LOQ	N,N-dimethylformamide	880	200	< LOQ
Pentanes (sum)	750	600	< LOQ	Propane	500	200	< LOQ
Propyl Acetate	500	500	< LOQ	Pyridine	100	50	< LOQ
Sulfolane	160	50	< LOQ	Tetrahydrofuran	250	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	Triethylamine	5000	500	< LOQ

Reviewed by Quality Assurance

Reviewed Date: 14-Jul-2026

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.