# 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 #** | 26080310 |

## 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** | 03-Aug-2026 |
| **PRODUCT RELEASE DATE** | 03-Aug-2026 |
| **RECOMMENDED USE BY DATE (RETEST DATE)** | 31-Aug-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: 03-Aug-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: 03-Aug-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.