

# Certificate of Analysis

For R&D Use Only - Not a California Compliance Certificate.

## Orange Julius

**Client: Healthy Alternatives**

Sample Name: Orange Julius

Batch Number: N/A

Matrix: Plant

Unit Mass: 1 g per unit

Sample ID: 6750122-5

Date Received: 7/22/2025



**Total CBD** **20.29 %**

**Delta 9-THC** **0.12 %**

**THCA** **0.17 %**

**Total Cannabinoids** **22.66 %**

### Analysis Summary

|                      |         |
|----------------------|---------|
| Residual Pesticides  | Pass    |
| Mycotoxins           | Pass    |
| Heavy Metals         | Pass    |
| Microbial Impurities | Pass    |
| Foreign Material     | Pass    |
| Moisture Content     | 11.07 % |
| Water Activity       | Pass    |
| Total Terpenes       | 2.18 %  |

### Cannabinoid Analysis

Complete

| Analyte                   | LOD (%)       | LOQ (%)       | Mass (%)      | Mass (mg/g)   |
|---------------------------|---------------|---------------|---------------|---------------|
| CBDV                      | 0.0035        | 0.011         | ND            | ND            |
| <b>CBD</b>                | <b>0.0030</b> | <b>0.0090</b> | <b>5.456</b>  | <b>54.56</b>  |
| CBG                       | 0.0038        | 0.011         | ND            | ND            |
| <b>CBDA</b>               | <b>0.0017</b> | <b>0.0052</b> | <b>16.919</b> | <b>169.19</b> |
| CBN                       | 0.00080       | 0.0024        | ND            | ND            |
| <b>Delta 9-THC</b>        | <b>0.0022</b> | <b>0.0067</b> | <b>0.115</b>  | <b>1.15</b>   |
| Delta 8-THC               | 0.0020        | 0.0059        | ND            | ND            |
| CBC                       | 0.00070       | 0.0021        | ND            | ND            |
| <b>THCA</b>               | <b>0.0024</b> | <b>0.0073</b> | <b>0.167</b>  | <b>1.67</b>   |
| <b>Total CBD</b>          |               |               | <b>20.29</b>  | <b>202.94</b> |
| <b>Total THC</b>          |               |               | <b>0.25</b>   | <b>2.55</b>   |
| <b>Total Cannabinoids</b> |               |               | <b>22.66</b>  | <b>226.57</b> |

Date Tested: 7/22/2025

Total THC = THCa \* 0.877 + d9-THC + d8-THC; Total CBD = CBDa \* 0.877 + CBD

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**References:** limit of detection (LOD), limit of quantitation (LOQ), not detected (ND), not tested (NT)

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## Pesticide Analysis

Pass

| Analyte                 | LOQ (ppm) | Limit (ppm) | Mass (ppm) | Status |
|-------------------------|-----------|-------------|------------|--------|
| Abamectin               | 0.050     | 0.10        | ND         | Pass   |
| Acephate                | 0.050     | 0.10        | ND         | Pass   |
| Acequinocyl             | 0.050     | 0.10        | ND         | Pass   |
| Acetamiprid             | 0.050     | 0.10        | ND         | Pass   |
| Aldicarb                | 0.050     | 0.00        | ND         | Pass   |
| Azoxystrobin            | 0.050     | 0.10        | ND         | Pass   |
| Bifenazate              | 0.050     | 0.10        | ND         | Pass   |
| Bifenthrin              | 0.050     | 3.00        | ND         | Pass   |
| Boscalid                | 0.050     | 0.10        | ND         | Pass   |
| Captan                  | 0.050     | 0.70        | ND         | Pass   |
| Carbaryl                | 0.050     | 0.50        | ND         | Pass   |
| Carbofuran              | 0.050     | 0.00        | ND         | Pass   |
| Chlorantraniliprole     | 0.050     | 10.00       | ND         | Pass   |
| Chlordane               | 0.050     | 0.00        | ND         | Pass   |
| Chlorfenapyr            | 0.050     | 0.00        | ND         | Pass   |
| Chlorpyrifos            | 0.050     | 0.00        | ND         | Pass   |
| Clofentezine            | 0.050     | 0.10        | ND         | Pass   |
| Coumaphos               | 0.050     | 0.00        | ND         | Pass   |
| Cyfluthrin              | 0.050     | 2.00        | ND         | Pass   |
| Cypermethrin            | 0.050     | 1.00        | ND         | Pass   |
| Daminozide              | 0.050     | 0.00        | ND         | Pass   |
| DDVP                    | 0.050     | 0.00        | ND         | Pass   |
| Diazinon                | 0.050     | 0.10        | ND         | Pass   |
| Dimethoate              | 0.050     | 0.00        | ND         | Pass   |
| Dimethomorph            | 0.050     | 2.00        | ND         | Pass   |
| Ethoprophos             | 0.050     | 0.00        | ND         | Pass   |
| Etofenprox              | 0.050     | 0.00        | ND         | Pass   |
| Etoxazole               | 0.050     | 0.10        | ND         | Pass   |
| Fenhexamid              | 0.050     | 0.10        | ND         | Pass   |
| Fenoxycarb              | 0.050     | 0.00        | ND         | Pass   |
| Fenpyroximate           | 0.050     | 0.10        | ND         | Pass   |
| Fipronil                | 0.050     | 0.00        | ND         | Pass   |
| Flonicamid              | 0.050     | 0.10        | ND         | Pass   |
| Fludioxonil             | 0.050     | 0.10        | ND         | Pass   |
| Hexythiazox             | 0.050     | 0.10        | ND         | Pass   |
| Imazalil                | 0.050     | 0.00        | ND         | Pass   |
| Imidacloprid            | 0.050     | 5.00        | ND         | Pass   |
| Kresoxim Methyl         | 0.050     | 0.10        | ND         | Pass   |
| Malathion               | 0.050     | 0.50        | ND         | Pass   |
| Metalaxyl               | 0.050     | 2.00        | ND         | Pass   |
| Methiocarb              | 0.050     | 0.00        | ND         | Pass   |
| Methomyl                | 0.050     | 1.00        | ND         | Pass   |
| Methyl Parathion        | 0.050     | 0.00        | ND         | Pass   |
| Mevinphos               | 0.050     | 0.00        | ND         | Pass   |
| Myclobutanil            | 0.050     | 0.10        | ND         | Pass   |
| Naled                   | 0.050     | 0.10        | ND         | Pass   |
| Oxamyl                  | 0.050     | 0.50        | ND         | Pass   |
| Paclobutrazol           | 0.050     | 0.00        | ND         | Pass   |
| Pentachloronitrobenzene | 0.050     | 0.10        | ND         | Pass   |
| Permethrin              | 0.050     | 0.50        | ND         | Pass   |
| Phosmet                 | 0.050     | 0.10        | ND         | Pass   |
| Piperonyl Butoxide      | 0.050     | 3.00        | ND         | Pass   |
| Prallethrin             | 0.050     | 0.10        | ND         | Pass   |
| Propiconazole           | 0.050     | 0.10        | ND         | Pass   |

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## Pesticide Analysis

Pass

| Analyte         | LOQ (ppm) | Limit (ppm) | Mass (ppm) | Status |
|-----------------|-----------|-------------|------------|--------|
| Propoxur        | 0.050     | 0.00        | ND         | Pass   |
| Pyrethrins      | 0.050     | 0.50        | 0.130      | Pass   |
| Pyridaben       | 0.050     | 0.10        | ND         | Pass   |
| Spinetoram      | 0.050     | 0.10        | ND         | Pass   |
| Spinosad        | 0.050     | 0.10        | ND         | Pass   |
| Spiromesifen    | 0.050     | 0.10        | ND         | Pass   |
| Spirotetramat   | 0.050     | 0.10        | ND         | Pass   |
| Spiroxamine     | 0.050     | 0.00        | ND         | Pass   |
| Tebuconazole    | 0.050     | 0.10        | ND         | Pass   |
| Thiacloprid     | 0.050     | 0.00        | ND         | Pass   |
| Thiamethoxam    | 0.050     | 5.00        | ND         | Pass   |
| Trifloxystrobin | 0.050     | 0.10        | ND         | Pass   |

Date Tested: 7/22/2025

## Mycotoxins

Pass

| Analyte      | LOQ (µg/g) | Limit (µg/g) | Mass (µg/g) | Status |
|--------------|------------|--------------|-------------|--------|
| Aflatoxin B1 | 0.02       | 0.02         | ND          | Pass   |
| Aflatoxin B2 | 0.02       | 0.02         | ND          | Pass   |
| Aflatoxin G1 | 0.02       | 0.02         | ND          | Pass   |
| Aflatoxin G2 | 0.02       | 0.02         | ND          | Pass   |
| Ochratoxin A | 0.02       | 0.02         | ND          | Pass   |

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## Heavy Metals Analysis

Pass

| Analyte | LOQ (µg/g) | Limit (µg/g) | Mass (µg/g) | Status |
|---------|------------|--------------|-------------|--------|
| Arsenic | 0.050      | 0.200        | ND          | Pass   |
| Cadmium | 0.050      | 0.200        | ND          | Pass   |
| Lead    | 0.125      | 0.500        | ND          | Pass   |
| Mercury | 0.025      | 0.100        | ND          | Pass   |

Date Tested: 7/22/2025

## Microbial Analysis

Pass

| Test                 | Limit (CFU/g) | Result (CFU/g) | Status |
|----------------------|---------------|----------------|--------|
| Total <i>E. coli</i> | <1            | Absent / 1g    | Pass   |
| <i>Salmonella</i>    | <1            | Absent / 1g    | Pass   |

Date Tested: 7/22/2025

CFU = Colony Forming Units

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## Moisture Content

Complete

| Test             | Result (%) |
|------------------|------------|
| Moisture Content | 11.07      |

Date Tested: 7/22/2025

## Water Activity

Pass

| Test           | Limit (Aw) | Result (Aw) | Status |
|----------------|------------|-------------|--------|
| Water Activity | 0.65       | 0.59        | Pass   |

Date Tested: 7/22/2025

## Terpenoid Analysis

Complete

| Analyte                 | LOQ (%)       | Mass (%)      | Mass (mg/g)  |
|-------------------------|---------------|---------------|--------------|
| Camphene                | 0.0085        | ND            | ND           |
| 3-Carene                | 0.0085        | ND            | ND           |
| <b>β-Caryophyllene</b>  | <b>0.0085</b> | <b>0.1473</b> | <b>1.473</b> |
| p-Cymene                | 0.0085        | ND            | ND           |
| <b>Eucalyptol</b>       | <b>0.0085</b> | <b>0.0127</b> | <b>0.127</b> |
| <b>Fenchol</b>          | <b>0.0085</b> | <b>0.0359</b> | <b>0.359</b> |
| <b>α-Humulene</b>       | <b>0.0085</b> | <b>0.4370</b> | <b>4.370</b> |
| <b>δ-Limonene</b>       | <b>0.0085</b> | <b>0.5076</b> | <b>5.076</b> |
| <b>Linalool</b>         | <b>0.0085</b> | <b>0.5273</b> | <b>5.273</b> |
| <b>β-Myrcene</b>        | <b>0.0085</b> | <b>0.4922</b> | <b>4.922</b> |
| Nerolidol               | 0.0085        | ND            | ND           |
| <b>α-Pinene</b>         | <b>0.0085</b> | <b>0.0239</b> | <b>0.239</b> |
| Terpinolene             | 0.0085        | ND            | ND           |
| <b>Total Terpenoids</b> |               | <b>2.18</b>   | <b>21.84</b> |

Date Tested: 7/22/2025

### Method References:

Hemp Profile (SOP HPLC Hemp by UV-Detection)

Multi-Residue Pesticide Analysis - (AOAC\_200701)

Official Methods of Analysis, AOAC Official Method 2007.01, Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate, AOAC INTERNATIONAL (modified).

CEN Standard Method EN 15662: Food of plant origin - Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE - QuEChERS method.

Mycotoxins Analysis - 5 compounds (FDA\_MYC)

Determination of Mycotoxins in Corn, Peanut Butter and Wheat Flour Using Stable Isotope Dilution Assay (SIDA) and Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) (modified).

Heavy Metals Analysis - 4 elements (EPA\_200.8)

Methods for the Determination of Metals in Environmental Standards - Supplement 1, EPA-600/R-94-111, May 1994.

"Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Mass Spectrometry", USEPA Method 200.8, Revision 5.1, EMMC Version (modified).

Microbial Analysis - (AOAC\_2014\_991)

Official Methods of Analysis, AOAC Official Method 2014.01 *Salmonella* in Selected Foods, AOAC Official Method 991.14 Coliform and *Escherichia coli* Counts in Foods; AOAC INTERNATIONAL (modified).

Moisture Content Analysis - (AOAC\_934\_06)

Official Methods of Analysis, Method 934.06.AOAC INTERNATIONAL, Moisture in Dried Fruits (modified).

Water Activity Analysis - (AOAC\_978\_18)

Official Methods of Analysis, Method 978.18.AOAC INTERNATIONAL, Water Activity of Canned Vegetables (modified).