



Cannabis Reference Standards

As regulation intensifies and the need for more testing grows, many cannabis producers and manufacturers are relying on accurate test results from state certified testing labs to document that their products are free of chemical contaminants that could cause potential harm to their customers.

Ricca offers ISO Guide 34 Certified Reference Materials (CRMs) for all of the common contaminants such as residual solvents, pesticide residues and heavy metals.

As regulations change please visit our website for the most up to date product offerings and information.

riccachemical.com/cannabis

Residual Solvents

| Ricca Part Number | Description | Matrix | Volume | Concentration | | |
|-------------------|---------------------------------------|--------------------------|---------------------------------------|--------------------|------|--------------|
| RV500008-1R | Cannabis Residual Solvents Mixture | | | Triacetin | 1 mL | 1000 mg/L |
| | 1,2-dimethoxyethane (DME) | 1,4-dioxane | 1-butanol | | | |
| | 1-pentanol | 1-propanol | 2,2-dimethylbutane | | | |
| | 2,3-dimethylbutane | sec-butanol (2-butanol) | 2-butanone (MEK) | | | |
| | 2-ethoxyethanol | 2-methylbutane | 2-methylpentane | | | |
| | 3-methylpentane | acetone | acetonitrile | | | |
| | benzene | cyclohexane | dimethyl sulfoxide (methyl sulfoxide) | | | |
| | ethyl alcohol (absolute) | ethyl acetate | diethyl ether | | | |
| | ethylbenzene | ethylene glycol | n-heptane | | | |
| | isobutane | isopropyl acetate | isopropyl alcohol (isopropanol) | | | |
| | isopropylbenzene | methanol | methylene chloride (dichloromethane) | | | |
| | m-xylene | N,N-dimethylacetamide | N,N-dimethylformamide | | | |
| | n-hexane | n-pentane | p-xylene | | | |
| | pyridine | tetrahydrofuran (THF) | sulfolane (tetramethylene sulfone) | | | |
| | toluene | butane | propane | | | |
| o-xylene | | | | | | |
| RV500009-1R | Residual Solvents-FET Mixture | | | Dimethyl Sulfoxide | 1 mL | 100 mg/L |
| | acetone | ethyl alcohol (absolute) | n-heptane | | | |
| | isopropyl alcohol (isopropanol) | acetonitrile | methanol | | | |
| | n-hexane | isobutane | propane | | | |
| | butane | | | | | |
| RV500014-1R | California Residual Solvent Mixture 1 | | | Triacetin | 1 mL | 20,000 µg/mL |
| | acetone | ethyl alcohol (absolute) | diethyl ether | | | |
| | ethyl acetate | n-heptane | isopropyl alcohol (isopropanol) | | | |
| | methanol | n-pentane | xylene (total) | | | |
| | butane | propane | | | | |

Residual Solvents

| Ricca Part Number | Description | | | Matrix | Volume | Concentration |
|-------------------|---------------------------------------|--------------------------|--------------------------------------|--------------------|--------|---------------|
| RV500015-1R | California Residual Solvent Mixture 2 | | | Triacetin | 1 mL | 2,000 µg/mL |
| | acetonitrile | n-hexane | methylene chloride (dichloromethane) | | | |
| | naphtha | petroleum ether | toluene | | | |
| RV500016-1R | California Residual Solvent Mixture 3 | | | Triacetin | 1 mL | Mixed |
| | benzene | chloroform | 1,2-dichloroethane | | | |
| | Trichloroethene | acetonitrile | methanol | | | |
| RV500023-1R | Oregon Cannabis Solvent Mixture | | | Triacetin | 1 mL | 1,000 mg/L |
| | 1,4-dioxane | 2,2-dimethylbutane | 2,3-dimethylbutane | | | |
| | sec-butanol (2-butanol) | 2-ethoxyethanol | 2-methylbutane | | | |
| | 2-methylpentane | 3-methylpentane | acetone | | | |
| | acetonitrile | benzene | cyclohexane | | | |
| | ethyl alcohol (absolute) | ethyl acetate | diethyl ether | | | |
| | ethylbenzene | ethylene glycol | n-heptane | | | |
| | isobutane | isopropyl acetate | isopropyl alcohol (isopropanol) | | | |
| | isopropylbenzene | methanol | methylene chloride (dichloromethane) | | | |
| | m-xylene | n-hexane | n-pentane | | | |
| | o-xylene | p-xylene | tetrahydrofuran (THF) | | | |
| | toluene | 2,2-dimethylpropane | butane | | | |
| propane | | | | | | |
| RV500005-1R | Cannabis Spiking Mixture | | | Dimethyl Sulfoxide | 1 mL | 100 mg/L |
| | isobutane | butane | propane | | | |
| RV500006-1R | Ethylene Oxide Solution | | | Methanol | 1 mL | 1,000 mg/L |
| RV500007-1R | VOC Mixture | | | Dimethyl Sulfoxide | 1 mL | 1,000 mg/L |
| | acetone | benzene | carbon tetrachloride | | | |
| | chloroform | ethyl alcohol (absolute) | n-heptane | | | |
| | isopropyl alcohol (isopropanol) | m-xylene | n-hexane | | | |
| | o-xylene | p-xylene | tetrahydrofuran (THF) | | | |
| | toluene | acetonitrile | n-pentane | | | |

Pesticides

| Ricca Part Number | Description | Matrix | Volume | Concentration | | |
|-------------------|--|------------------------------------|--------------|---------------|-----------|------------------------|
| RV500010-1R | California Pesticide Mixture 1 | | Acetonitrile | 1 mL | 100 µg/mL | |
| | abamectin | acephate | | | | acequinocyl |
| | acetamiprid | aldicarb | | | | azoxystrobin |
| | bifenazate | bifenthrin | | | | boscalid |
| | carbaryl (sevin) | carbofuran | | | | chlorfenapyr |
| | chlorpyrifos | clofentezine | | | | cyfluthrin (baythroid) |
| | cypermethrin | diazinon | | | | daminozide |
| | chlorantraniliprole | dichlorvos | | | | |
| RV500011-1R | California Pesticide Mixture 2 | | Acetonitrile | 1 mL | 100 µg/mL | |
| | dimethoate | etofenprox | | | | ethoprop (ethoprosfos) |
| | etoxazol | fenoxycarb | | | | fenpyroximate |
| | fipronil | flonicamid | | | | fludioxonil |
| | hexythiazox | imazalil | | | | imidacloprid |
| | kresoxim-methyl | malathion | | | | metalaxyl |
| | methiocarb | methomyl | | | | methyl parathion |
| | MGK-264 (mixed, total) | myclobutanil | | | | |
| RV500012-1R | California Pesticide Mixture 3 | | Acetonitrile | 1 mL | 100 µg/mL | |
| | prallethrin | propoxur | | | | pyrethrins |
| | spinosad | spiromesifen | | | | spirotetramat |
| | thiacloprid | naled | | | | oxamyl |
| | paclobutrazol | permethrins (mixed isomers, total) | | | | phosmet |
| | piperonyl butoxide | propiconazole | | | | pyridaben |
| | spiroxamine | tebuconazole | | | | thiamethoxam |
| | trifloxystrobin | dichlorvos | | | | |
| RV500013-1R | California Supplemental Cannabis Pesticide Mixture | | Acetonitrile | 1 mL | 100 µg/mL | |
| | captan | coumaphos | | | | dimethomorph |
| | fenhexamid | pentachloronitrobenzene | | | | mevinphos (phosdrin) |
| | spinetoram | | | | | |
| RV500017-1R | Colorado Cannabis Pesticide Mixture | | Acetonitrile | 1 mL | 100 µg/mL | |
| | abamectin | azoxystrobin | | | | bifenazate |
| | etoxazol | imazalil | | | | imidacloprid |
| | malathion | permethrins (mixed isomers, total) | | | | spinosad |
| | spiromesifen | spirotetramat | | | | myclobutanil |
| | tebuconazole | | | | | |
| RV000018-1R | Nevada Pesticide Mixture | | Isopropanol | 1mL | 100 µg/mL | |
| | abamectin | acequinocyl | | | | cyfluthrin (baythroid) |
| | bifenazate | bifenthrin | | | | captan |
| | cypermethrin | dimethomorph | | | | etoxazol |
| | fenhexamid | flonicamid | | | | fludioxonil |
| | imidacloprid | pentachloronitrobenzene | | | | piperonyl butoxide |
| | pyrethrins | spinetoram | | | | spinosad |
| | spirotetramat | myclobutanil | | | | thiamethoxam |
| | trifloxystrobin | | | | | |

Pesticides

| Ricca Part Number | Description | Matrix | Volume | Concentration | | |
|-------------------|-----------------------------|--------------|--------|---------------|---------------------|------------------------------------|
| RV500020-1R | Oregon Pesticide Mixture 1 | Acetonitrile | 1 mL | 100 µg/mL | | |
| | abamectin | | | | acephate | acequinocyl |
| | acetamiprid | | | | aldicarb | azoxystrobin |
| | cyfluthrin (baythroid) | | | | bifenazate | bifenthrin |
| | boscalid | | | | carbaryl (sevin) | carbofuran |
| | chlorfenapyr | | | | chlorpyrifos | clofentezine |
| | cypermethrin | | | | daminozide | diazinon |
| | dichlorvos | | | | chlorantraniliprole | |
| RV500021-1R | Oregon Pesticide Mixture 2 | Acetonitrile | 1 mL | 100 µg/mL | | |
| | dimethoate | | | | etofenprox | ethoprop (ethoprofos) |
| | etoxazol | | | | fenoxycarb | fenpyroximate |
| | fipronil | | | | flonicamid | fludioxonil |
| | hexythiazox | | | | imazalil | imidacloprid |
| | kresoxim-methyl | | | | malathion | metalaxyl |
| | methiocarb | | | | methomyl | methyl parathion |
| | MGK-264 (mixed, total) | | | | myclobutanil | |
| RV500022-1R | Oregon Pesticide Mixture 3 | Acetonitrile | 1 mL | 100 µg/mL | | |
| | oxamyl | | | | paclobutrazol | permethrins (mixed isomers, total) |
| | phosmet | | | | piperonyl butoxide | propiconazole |
| | propoxur | | | | pyrethrins | pyridaben |
| | spinosad | | | | spiromesifen | spirotetramat |
| | spiroxamine | | | | tebuconazole | thiacloprid |
| | thiamethoxam | | | | trifloxystrobin | prallethrin |
| RV500000-1R | Imidacloprid Solution | Acetonitrile | 1 mL | 100 µg/mL | | |
| RV500001-1R | Thiamethoxam Solution | Acetonitrile | 1 mL | 100 µg/mL | | |
| RV500002-1R | Fludioxonil Solution | Acetonitrile | 1 mL | 100 µg/mL | | |
| RV500003-1R | Piperonyl Butoxide Solution | Acetonitrile | 1 mL | 100 µg/mL | | |
| RV500004-1R | Cypermethrin Solution | Acetonitrile | 1 mL | 100 µg/mL | | |

Terpenes

| Ricca Part Number | Description | Matrix | Volume | Concentration | | |
|-------------------|------------------------------------|--------------------------|-----------------|---------------|-----------|-------------------------------|
| RV500024-1R | Cannabis Testing Terpene Mixture 2 | | Methanol P&T | 1 mL | 100 mg/L | |
| | (-)-a-bisabolol | caryophyllene oxide | | | | (-)-isopulegol |
| | (+)-fenchone (sum of enantiomers) | camphene | | | | camphor |
| | myrcene (tech) | menthol | | | | isoborneol |
| | linalool | nerol | | | | ocimene |
| | a-phellandrene | b-caryophyllene | | | | eucalyptol |
| | (+)-cedrol | (+)-3-carene | | | | farnesene, mixture of isomers |
| | geranyl acetate | (+)-valencene | | | | cis-nerolidol |
| RV500025-1R | Cannabis Testing Terpene Mixture 1 | | Methanol P&T | 1 mL | 100 mg/L | |
| | (-)-borneol (sum of enantiomers) | 1-borneol | | | | pulegone |
| | R-(+)-limonene | a-cedrene | | | | a-humulene |
| | a-terpinene | alpha-pinene | | | | g-terpinene |
| | geraniol | (-)-guaiol | | | | fenchone |
| | sabinene | terpinolene (tech grade) | | | | b-pinene |
| | d-camphor | (-)-camphor | | | | (+)-fenchol |
| | terpineol | trans-nerolidol | | | | |
| RV500026-1R | Cannabis Testing Terpene Mixture | | Isopropanol | 1 mL | 1000 mg/L | |
| | camphene | eucalyptol | | | | geraniol |
| | g-terpinene | nerol | | | | (+)-3-carene |
| | (+)-valencene | | | | | |
| RV500019-1R | Nevada Terpene Mixture | | Isopropanol | 1 mL | 1000 mg/L | |
| | caryophyllene oxide | dipentene | | | | linalool |
| | a-humulene | alpha-pinene | | | | terpinolene (tech grade) |
| | myrcene (tech) | b-pinene | | | | a-Bisabolol |

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