



## Analytical Standards for Medicinal and Recreational Cannabis Testing

While the legalization of cannabis, for both medicinal and recreational purposes, has been gaining speed, legislation and regulation has not necessarily kept pace. Even so, out of a drive for self-regulation and significant consumer safety concerns, many producers and manufacturers are turning to testing labs in order to ensure that their products are of high quality and free of chemical contaminants. SPEX CertiPrep offers ISO Guide 34 Certified Reference Materials (CRMs) for all of the common contaminants such as pesticide residues, residual solvents and heavy metals, as well as qualitative analysis CRMs such as terpenes. As the industry demands change and regulations are put into place, we continually update our product offerings.

For additional product information, please visit [www.spexcertiprep.com/cannabis](http://www.spexcertiprep.com/cannabis).

### Designed for Methods: State Specific Pesticide Regulations

• OAR 333-008-11 • HB 3460 • AOAC 2007.01 • EN 15662

#### Pesticide Residues

Description	Concentration	Volume	Matrix	Part #
Organochlorine Pesticides Mix A, 18 compounds	200 µg/mL	1 mL	Acetone	5252-PA
Organochlorine Pesticides Mix B, 15 compounds	200 µg/mL	1 mL	Acetone	5252-PB
Nitrogen-Phosphorus Pesticides Mix C, 33 compounds	200 µg/mL	1 mL	Methylene Chloride	5252-PC
Nitrogen-Phosphorus Pesticides Mix D, 9 compounds	200 µg/mL	1 mL	Acetone	5252-PD
Nitrogen-Phosphorus Pesticides Mix E, 3 compounds	200 µg/mL	1 mL	Acetone	5252-E

#### Terpenes

Compound	CAS #	Concentration	Volume	Matrix	Part #
Borneol	507-70-0	1,000 µg/mL	1 mL	Methanol-P&T	S-4570
Eucalyptol	470-82-6	1,000 µg/mL	1 mL	Methanol	S-4352
(R)-(+)-Limonene	5989-27-5	1,000 µg/mL	1 mL	Methanol-P&T	S-4021
Linalool	78-70-6	1,000 µg/mL	1 mL	Methanol	S-5133
alpha-Pinene	80-56-8	1,000 µg/mL	1 mL	Methanol-P&T	S-4172
beta-Pinene	127-91-3	1,000 µg/mL	1 mL	Methanol-P&T	S-3142

## CERTIFIED REFERENCE MATERIALS

SPEX CertiPrep is the industry leader for over 60 years in the CRM marketplace meeting the needs of laboratories worldwide with innovation and research. Accredited by A2LA to ISO/IEC 17025:2005 & ISO Guide 34:2009. Certified by DQS to ISO 9001:2015.

## Residual Solvents

Compound	CAS #	Concentration	Volume	Matrix	Part #
Residual Solvent Mix, 24 compounds	Multiple	1,000 µg/mL	1 mL	Dimethyl sulfoxide	USP-RS-C3A
Acetone	67-64-1	1,000 µg/mL	1 mL	Methanol-P&T	S-140
n-Butane	106-97-8	1,000 µg/mL	1 mL	Methanol-P&T	S-605
Ethane	74-84-0	1,000 µg/mL	1 mL	Methanol-P&T	S-1880
Ethanol	64-17-5	1,000 µg/mL	1 mL	Methanol-P&T	S-1885
n-Hexane	110-54-3	1,000 µg/mL	1 mL	Methanol-P&T	S-2190
Methane	74-82-8	1,000 µg/mL	1 mL	Methanol-P&T	S-2379
2-Methylbutane	78-78-4	1,000 µg/mL	1 mL	Methanol-P&T	S-2462
2-Methylpropane	75-28-5	1,000 µg/mL	1 mL	Methanol-P&T	S-2555
n-Pentane	109-66-0	1,000 µg/mL	1 mL	Methanol-P&T	S-2975
Propane	74-98-6	1,000 µg/mL	1 mL	Methanol-P&T	S-3145
2-Propanol	67-63-0	1,000 µg/mL	1 mL	Methanol-P&T	S-3165

## Terpene Mixes - CAN-TERP-MIX1 & CAN-TERP-MIX2

Purchase together as CAN-TERP-KIT and save!

## Can-Terp Mix 1 - 21 Compounds

Compound	CAS #	Concentration	Volume	Matrix	Part #
(-)-alpha-Bisabolol	23089-26-1	100 µg/mL for each component in the mix	1 mL	Methanol	CAN-TERP-MIX1
Camphene	79-92-5				
Camphor	76-22-2				
(1S)-(+)-3-Carene	498-15-7				
(-)-Caryophyllene oxide	1139-30-6				
trans-Caryophyllene	87-44-5				
(+)-Cedrol	77-53-2				
Eucalyptol	470-82-6				
Farnesene (mix of Isomers)	502-61-4				
(+)-Fenchone	4695-62-9				
Geranyl acetate	105-87-3				
Hexahydrothymol	89-78-1				
Isoborneol	124-76-5				
(-)-Isopulegol	89-79-2				
Linalool	78-70-6				
p-Mentha-1,5-diene	99-83-2				
beta-Myrcene	123-35-3				
Nerol	106-25-2				
cis-Nerolidol	3790-78-1				
Ocimene (mix of isomers)	13877-91-3				
Valencene	4630-07-3				

# Cannabis (cont'd)

## Can-Terp Mix 2 - 21 Compounds

Compound	CAS #	Concentration	Volume	Matrix	Part #
(+)-Borneol	464-43-7	100 µg/mL for each component in the mix	1 mL	Methanol	CAN-TERP-MIX2
(-)-Borneol	464-45-9				
(1R)-(+)-Camphor	464-49-3				
(1S)-(-)-Camphor	464-48-2				
alpha-Cedrene	469-61-4				
L(-)-Fenchone	7787-20-4				
(1R)-endo-(+)-Fenchyl alcohol	2217-02-9				
Geraniol	106-24-1				
Guaiol	489-86-1				
alpha-Humulene	6753-98-6				
(R)-(+)-Limonene	5989-27-5				
trans-Nerolidol	40716-66-3				
a-Pinene	80-56-8				
beta-Pinene	127-91-3				
(+)-Pulegone	89-82-7				
alpha-Terpinene	99-86-5				
gamma-Terpinene	99-85-4				
Terpinolene	586-62-9				
Terpineol (mix of isomers)	8000-41-7				
Sabinene	3387-41-5				
Sabinene hydrate	546-79-2				

## DEA Controlled Substances

Description	CAS #	Concentration	Volume	Matrix	Part #
Cannabidiol (CBD)	13956-29-1	1,000 µg/mL	1 mL	Methanol	S-10241
Cannabinol (CBN)	521-35-7	1,000 µg/mL	1 mL	Methanol	S-10242
Cannabidivarin (CBDV)	24274-48-4	1,000 µg/mL	1 mL	Methanol	S-10245
Cannabigerol (CBG)	2808-33-5	1,000 µg/mL	1 mL	Methanol	S-10246
Cannabigerolic acid (CBGA)	25555-57-1	1,000 µg/mL	1 mL	Acetonitrile	S-10247
Cannabichromene (CBC)	20675-51-8	1,000 µg/mL	1 mL	Methanol	S-10248
Cannabidolic acid (CBDA)	1244-58-2	1,000 µg/mL	1 mL	Acetonitrile	S-10249
(-)-delta9-THC	1972-08-3	1,000 µg/mL	1 mL	Methanol	S-10260
(-)-delta8-THC	5957-75-5	1,000 µg/mL	1 mL	Methanol	S-10261
Cannabidivarinic acid (CBDVA)	31932-13-5	1,000 µg/mL	1 mL	Acetonitrile	S-11055
Tetrahydrocannabinolic acid (THCA)	23978-85-0	1,000 µg/mL	1 mL	Acetonitrile	S-11056
Tetrahydrocannabivarin (THCV)	31262-37-0	1,000 µg/mL	1 mL	Methanol	S-11057
Tetrahydrocannabivarinic acid (THCVA)	28172-17-0	1,000 µg/mL	1 mL	Acetonitrile	S-11058
Cannabichromenic acid (CBCA)	20408-52-0	1,000 µg/mL	1 mL	Acetonitrile	S-11059

Heavy Metals				
Element	Concentration	Volume	Matrix	Part #
Heavy Metals Mix, 4 Metals	Multiple	125 mL	5% HNO <sub>3</sub>	USP-TXM2
Arsenic	1,000 µg/mL	125 mL	2% HNO <sub>3</sub>	PLAS2-2Y
Cadmium	1,000 µg/mL	125 mL	2% HNO <sub>3</sub>	PLCD2-2Y
Chromium	1,000 µg/mL	125 mL	2% HNO <sub>3</sub>	PLCR2-2Y
Lead	1,000 µg/mL	125 mL	2% HNO <sub>3</sub>	PLPB2-2Y
Mercury	1,000 µg/mL	125 mL	10% HNO <sub>3</sub>	PLHG4-2Y
Nickel	1,000 µg/mL	125 mL	2% HNO <sub>3</sub>	PLNI2-2Y
Silver	1,000 µg/mL	125 mL	2% HNO <sub>3</sub>	PLAG2-2Y
Thallium	1,000 µg/mL	125 mL	2% HNO <sub>3</sub>	PLTL2-2Y

## OdorEroder®

OdorEroder® effectively neutralizes a wide range of offensive chemical odors and fumes in the lab, everything from Aldehydes to Xylene. These non-toxic, environmentally safe purple beads are placed where airborne odor-causing chemicals are most likely to pass near them. Compounds in the beads trap and chemically transform these odor-causing chemicals into harmless, scentless compounds that remain trapped within the beads. The efficacy of the beads is easily observed as they turn from purple to brown to facilitate the chemical reaction required to deodorize your workspace. When a majority of the beads have turned brown, it is time to replace the OdorEroder®. Depending on levels of exposure, the OdorEroder® lasts up to 3 months.

### OdorEroder® is effective in the following areas:

Hoods • Waste Disposal Areas • Lab Benches • Chemical Storage Cabinets • Glove Boxes • Lab Refrigerators • Other Odor-Causing Areas within a Lab

Description	Part #
OdorEroder® - 100 g	ODER-100G
OdorEroder® - 250 g	ODER-250G

### CAN'T FIND THE STANDARDS YOU ARE LOOKING FOR?

SPEX CertiPrep can make custom standards to meet your exact needs. Contact us for more information.

