

HEMP TESTING CAPABILITIES

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ABOUT PURITY

ABOUT PURITY

Purity Laboratories, Inc. (Purity), has been serving our customers for more than 50 years with accurate, precise and comprehensive environmental laboratory testing. We have deep experience in testing a broad range of food and dietary supplement products from raw ingredients to finished products. This experience has allowed us to take a state-of-the-art approach to testing hemp for both our current customers that have expanded their lines to include hemp products and for new customers that need a laboratory that they can trust. Purity has been an ISO 17025 certified laboratory since 2014. This year, we expect to receive ISO certification for key hemp testing activities.



CENTER OF EXCELLENCE

Purity is honored to be named as a “Center of Excellence” for Agilent Technologies, the country's leading manufacturer of mass spectrometry instruments, to expand certain laboratory capabilities, including testing of hemp and toxic compounds.

Purity's laboratory is approximately 19,000 sq. ft. with state-of-the-art laboratory facilities and equipment including the most advanced mass spectrometry technology in LC-MS, GC-MS, ICP-MS, and HPLC-DAD for advanced detection.

We offer a comprehensive program for hemp testing, which includes our proprietary “Purity Tested™” certification for Purity's “gold-standard” hemp testing package.



Agilent Technologies
Center of Excellence

CANNABINOIDS TESTING

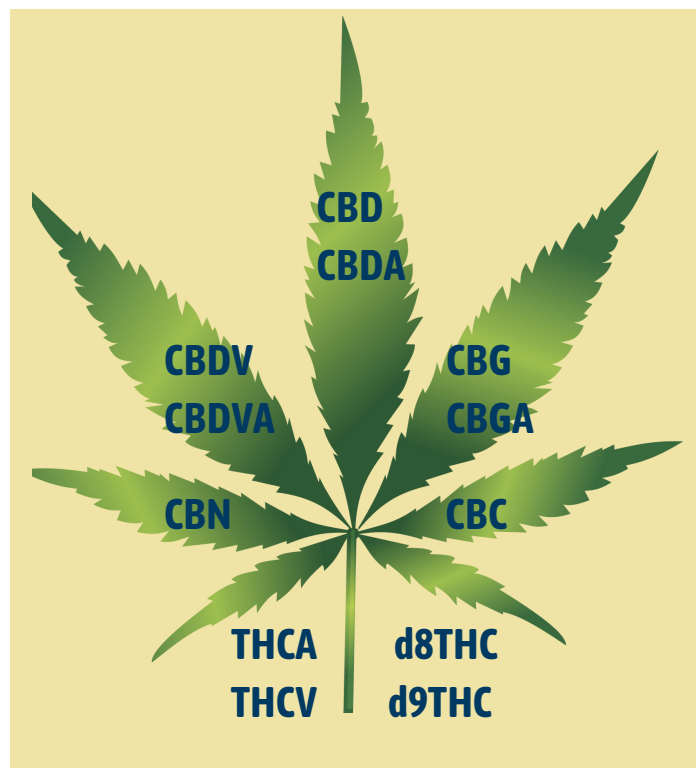
BACKGROUND

An initial objective in hemp potency testing may involve assays to determine not only CBD levels, but to ensure THC levels do not exceed the legal limit of 0.3% THC. This analysis includes testing at the cultivation stage, as hemp crops can vary significantly in cannabinoid levels and ratios according to the cultivator or breed, and environmental conditions such as grow location, light source, soil conditions, and other factors. Cannabinoid potency testing at the downstream processing stages is required to ensure desired levels are maintained to the point of sale.

DESCRIPTION

Cannabinoids are chemicals found in cannabis. The most notable cannabinoid is the phytocannabinoid tetrahydrocannabinol (THC) (Delta9-THC or Delta8-THC), which is the primary psychoactive compound in cannabis. Cannabidiol (CBD) is another major constituent of the plant. There are at least 113 different cannabinoids isolated from cannabis, exhibiting varied effects.

Purity offers a 12 panel cannabinoid test for the following: THC-Delta 8, THC - Delta 9; THC-A; THCV; CBD; CBD-A; CBDV, CBDV-A, CBG, CBG-A, CBN and CBC.



*Test Menu for Cannabinoids . . .
See Page 13*

INSTRUMENTATION

Purity utilizes High-Performance Liquid Chromatography with Diode-Array Detection (HPLC-DAD) and proprietary methodologies to identify and quantify select cannabinoids. Testing includes identifying and quantifying the following cannabinoids listed in the table below.

PESTICIDES TESTING

BACKGROUND

Since the Farm Bill passed in December 2018, which legalized the use of hemp at the federal level, states are grappling with the new regulations required.

Many states have introduced regulations for testing pesticides, which growers commonly use in CBD/hemp production. While these regulations are expected to evolve as the hemp industry matures, many states are requiring minimum acceptable levels of specific pesticides and mycotoxins for hemp that may be potentially headed for retail markets. Generally, many state have enacted the same regulations for hemp that regulate their medical marijuana markets.



DESCRIPTION

Purity Laboratories (Purity) currently offers a 59-pesticide panel that tests CBD/hemp products according to regulations adopted by the State of Oregon (ORELAP). Pesticides required by Washington, Colorado and California will be added by mid-2020.

Relying on our decades of analytical testing experience for hundreds of other pesticides, Purity also offers our proprietary screen for 900+ of the most dangerous pesticides that threaten human health. These pesticides were selected based on evidence that they may cause cancer and/or birth defects. This testing goes far beyond the requirements by any state for pesticide testing.

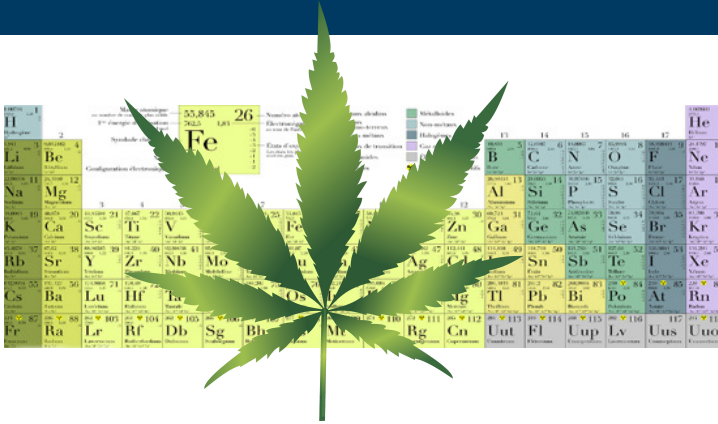
Customers that subscribe to our proprietary "Purity Tested™" hemp package are licensed to use our "Purity Tested" seal on their products and promotional materials.

INSTRUMENTATION

Pesticide testing at Purity is performed by state-of-the-art gas chromatography mass spectrometry.

- *59 Pesticide Panel Description*
... See Page 14
- *930 Pesticide Panel Description*
... See Pages 15 - 18

HEAVY METALS TESTING



BACKGROUND

Heavy metals are common environmental contaminants resulting from human industrial activities such as mining operations, industrial waste, automotive emissions, coal fired power plants and farm/household water run-off. They affect the water and soil, and become concentrated in plants, animals, pesticides and the sediments used to make fertilizers. They can also be present in low quality glass or plastic packaging materials that can leach into hemp fields upon contact. The inputs used by cultivators that can be contaminated with heavy metals include fertilizers, growing media, air, water and even the clone/plant itself.

Most states do not require testing for heavy metals in CBD/hemp products. For states that require testing for metals, they are likely to limit the testing to the four most problematic metals, which are: lead, arsenic, mercury and cadmium. There are in fact, 24 heavy metals that can cause human health problems, including 12 heavy metals that can cause serious chronic illnesses, cancers and birth defects.

DESCRIPTION

Hemp plants demonstrate a strong capacity to accumulate heavy metals in its tissues. In fact, researchers are exploring the possibility of remediating contaminated soil by planting hemp and cannabis. This development will be important for the sustainability of hemp farming. However, this makes heavy metals testing important to insure the safety of hemp products.

Purity offers its proprietary 24-heavy metal test panel which includes the most common metals that negatively affect human health. Purity also offers a 4 heavy metals test panel that includes the four most commonly regulated metals (lead, mercury, arsenic and cadmium).

Heavy Metals Test Panels Menu
... See Page 13& 14

INSTRUMENTATION

Purity uses the most accurate and sensitive instruments to conduct heavy metal tests (Inductively Coupled Plasma Mass Spectrometry (ICP-MS)) and a proprietary panel that measures 24 heavy metals in hemp and hemp products.

TERPENE TESTING

BACKGROUND

Terpenes are molecules of multiple isoprene units that give plants and flowers, including cannabis strains, their identifying aromatic, taste and flavor characteristics.




The essential oils of plants such as hemp contain terpenes, a large group of terpenes that are volatile and unsaturated hydrocarbons. Terpenes account for the vast array of smells and flavors in cannabis flowers and extracts and provide the notable aromas of cannabis varieties.

Some of the medical and physiological benefits found in cannabis have been attributed to terpenes including anti-inflammatory properties and as modulators for therapeutic and psychoactive effects of cannabinoids. There growing activity and interest in the manipulation of terpenes to develop the applications of cannabis in a wide variety of products.

Genetic and environmental factors, as well as drying and curing processes, determine the types and levels of terpenes present in usable cannabis.

It is in the process of the drying and curing that terpenes are oxidized and denatured to form terpenoids.

*Test Menu for Terpenes
... See Page 13*

	TERPENE	BENEFIT	AROMA
	Pinene Also found in pine needles	Anti-inflammatory Anti-bacterial Bronchodilator Aids memory	Pine Earth
	Myrcene Also found in hops	Sedative Sleep aid Muscle relaxant	Flowers Pungent Earth
	Limonene Also found in citrus	Treats acid reflux Anti-anxiety Antidepressant	Citrus Fresh spice
	Terpinolene Also found in coriander	Analgesic Pain reduction Digestive aid Stomachic	Pine Herbal Anise Lime
	Linalool Also found in lavender	Anesthetic Anti-convulsive Analgesic Anti-anxiety	Flowers Lavender Citrus Fresh spice
	Terpineol Also found in mugwort	Calming aid Antibacterial Antiviral Immune system	Pleasant lilac Citrus Wood
	Caryophyllene Also found in black pepper	Anti-inflammatory Analgesic Protects cells lining Digestive tract	Citrus Spice
	Humulene Also found in basil	Anti-inflammatory	Robust Herbaceous Earth
	Ocimene Also found in thyme and alfalfa	Decongestant Antiseptic Antiviral Bactericidal	Citrusy green Wood Tropical fruit

INSTRUMENTATION

In order to accurately test for these terpenes, Purity analyzes 49 terpenes common to hemp using the Agilent 7697A/7890B/5977B headspace-gas chromatography-mass selective detection (HSS-GC-MSD) system with concomitant flame ionization detector (FID) detection.

RESIDUAL SOLVENT TESTING

BACKGROUND

Residual solvents are the byproducts of extraction processes such as vacuum, heat, and winterization. In some cases, these impurities can be toxic, which is why residual solvent analysis is a critical element of hemp testing.

DESCRIPTION

Laboratory testing is typically conducted for a variety of harmful residual solvents, including acetone, ethanol, butane, benzene, propane and more. Solvents are classified in one of three classes:

- Class 1 - solvents to be avoided in the production of cannabis extracts – these include known and suspected carcinogens and environmental hazards.
- Class 2 - solvents not to be used outside of a stringent Good Manufacturing Practice environment – these include animal carcinogens, teratogens, or reversible neurotoxins.
- Class 3 - solvents with low toxic potential and the only class recommended for use in cannabis extract production – none are known to pose a risk to human health at levels to be expected in a hemp extract.

*Test Menu for
Residual Solvents
. . . See Page 13*



INSTRUMENTATION

Residual solvent analysis is best performed using a process called headspace sampling. In headspace analysis, researchers use a gas-tight syringe to obtain a sample of the gases in the headspace of a sealed vial which contains the prepared sample. The vapors of any volatile components will thus be acquired in the headspace sample.

Coupling headspace analysis with gas chromatography (GC) lends the most reliable results. Purity approaches residual solvent analysis by pairing GC with a headspace sampler and a Flame Ionization Detector (FID). GC is used to separate and analyze compounds that can be vaporized without decomposition. An FID, an instrument commonly used with GC, measures the concentration of organic species in a gas stream. Together, all of these analytical techniques and tools enable Purity to measure the existence of harmful solvents in concentrated hemp products.

Without residual solvent analysis, hemp users could be repeatedly exposed to chemical residues which could have a significant negative impact on health.

MICROBIAL TESTING



BACKGROUND

In general, microorganisms can cause disease in two distinct ways. The first is through active infection: high-level replication in the host can lead to structural damage, toxicity, and dangerous hyperactivation of the immune system. The second is due to the fact that certain species of bacteria and fungi can produce toxins, which can be ingested and cause disease even in the absence of viable bacterial or fungal cells.

DESCRIPTION

Not every state requires microbial testing. Colorado and Washington require hemp to be tested for microbiological contamination. However, these states have instituted very divergent rules for how to implement these tests.

Washington State produced a set of guidelines based on recommendations in the American Herbal Pharmacopoeia's Cannabis Monograph. These were drawn

largely from guidelines specified by the American Herbal Products Association (AHPA) Cannabis Monograph.

Colorado included a list of microbiology testing requirements in its legislation establishing the legalization of the hemp industry in that state. These included a list of microorganisms that testing would be required for, which was drawn from the small existing literature on hemp microbiology. Purity can test microbials to cover both state requirements.

INSTRUMENTATION

Purity's microbial laboratory is run by experts from the food testing industry, incorporating the same standards of quality required by the USDA and FDA. Purity has combined advanced VIDAS technology with 3M™ Petrifilm™ Rapid Yeast and Mold plating to provide you full panel, salmonella, and total yeast and mold count analyses in as *little as three days*. In addition to microbial contaminants tests, we also deliver an array of food safety and research testing experience including water activity, pH, common pathogenic identifications.

Test Menu for Microbial Testing . . . See Page 13

WATER ACTIVITY TESTING TESTING

BACKGROUND

Water activity testing results contribute greatly to a shelf stability analysis.

Water activity testing can be useful for clients in the research and development phase. Our results can identify plant water content and help troubleshoot the presence of microbial contaminants.

DESCRIPTION

Water activity currently only appears in the regulations or guidance documents for a few states. It is expected that additional states will add water activity testing requirements to their regulations as markets mature; and possibly included in federal guidelines.



INSTRUMENTATION

Purity uses an instrument with the capability to analyze dew point and capacitance. This dual-analysis feature allows measurement of water activity in non-volatile samples—such as cookies and candies—as well as volatile samples—like ethanol extracts and ethanol-based tinctures.



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matter!

Potency

Residual Solvents

Heavy Metals

Pesticides

Micro

Terpenes

Water Activity

Moisture

Test #	CHEMISTRY TESTS	Instrument	Price
H201	Potency-Flower, Oil and Dietary Supplement Matrices (12 Cannabinoids)	HPLC-UV	\$70.00
H202	Potency-Food, Edibles Matrices (12 Cannabinoids)	HPLC-UV	Quoted
H203	Residual Solvents - Oil and Dietary Supplement Matrices (24 Compounds)	GC-FID	\$125.00
H104	Pesticide Assay (59 Compounds) - OAR 333-007-0400	GC-MS	\$175.00
CH932	Pesticide Screen (900+ Compounds)	GC-MS	\$300.00
H205	Terpenes* - Flower and Oil Matrices (33 Compounds)	GC-MS	\$100.00
H206	Terpenes* - Other Matrices (33 Compounds)	GC-MS	\$100.00
CH114	Heavy Metals (4 Compounds)	ICP-MS	\$70.00
CH119	Heavy Metals (24 Compounds)	ICP-MS	\$250.00
H150	Wet Flower Processing Fee	Lab	\$50.00
CH032	Moisture Content	Lab	\$23.00
CH047	Water Activity	Lab	\$45.00
Test #	MICROBIOLOGY TESTS	Method	Price
MI041	Micro Screen Standard Package (APC, TC/EC, Y/M)	VARIOUS	\$57.00
MI0100	Micro USP Comprehensive Package (APC, Y/M, TC/EC, Pseudomonas Staphylococcus, Bile Tolerant, E. coli, Salmonella)	VARIOUS	\$95.00
MI002	Aerobic Plate Count	FDA BAM	\$18.70
MI010	Total Coliforms/E. coli (Petrifilm)	AOAC	\$23.00
MI037	Yeast and Mold	FDA BAM	\$21.00
MI011	E. coli	USP	\$34.00
MI023	Pseudomonas	USP	\$21.00
MI025	Salmonella	USP	\$34.00
MI034	Staphylococcus aureus	USP	\$38.00
MI012VD	E. coli O157:H7 (25g)	VIDAS	\$37.00
MI020VD	Listeria	VIDAS	\$33.00
MI026VD	Salmonella (25g)	VIDAS	\$36.00
Test #	HEMP PACKAGES		Price
H110	Hemp Flower Package - Includes Potency Testing, Pesticide Assay (59 Pesticides), Moisture Content, Water Activity		\$300.00
H115	Hemp Edibles Package - Includes Potency Testing, Micro Screen (Standard), 4 Metals		Quoted
H111	Hemp Package w/o Pesticides - Includes Potency Testing, Moisture Content, Water Activity		\$170.00
H112	Oregon Hemp Package - Includes Potency Testing, Residual Solvents, Pesticide Assay (59 Pesticides), Micro Screen (USP)		\$350.00
H113	Dietary Supplements Hemp Package - Includes Potency Testing, Micro Screen (USP), 4 Metals		\$220.00
H114	Purity Tested™ Package - Includes Potency Testing, Pesticide Assay (59 Pesticides), Pesticide Screen (900+ Compounds), Moisture Content, Water Activity, Micro Screen (USP, 24 Metals, Terpenes)		\$750.00





"Where measurements matter."

Hemp Laboratory Tests

Potency Test Includes (12 Cannabinoids): d-8 and d-9 THC, THCA, THCV, CBD, CBDA, CBDV, CBDVA, CBG, CBGA, CBN, CBC

Residual Solvents Test Includes (24 Residual Solvents): 1,4-Dioxane, 2-Butanol, 2-Ethoxyethanol, 2-Propanol (IPA), Acetone, Acetonitrile, Benzene, Butanes, Cumene, Cyclohexane, Dichloromethane, Ethyl acetate, Ethyl ether, Ethylene glycol, Ethylene Oxide, Heptane, Hexanes, Isopropyl acetate, Methanol, Pentanes, Propane, Tetrahydrofuran, Toulene, Xylenes

Pesticides Assay Includes (59 Pesticides): Abamectin, Acephate, Acequinocyl, Acetamiprid, Aldicarb, Azoxystrobin, Bifenazate, Bifenthrin, Boscalid, Carbaryl, Carbofurn, Chlorantraniliprole, Chlorfenapyr, Chlorpyrifos, Clofentezine, Cufluthrin, Cypermethrin, Daiminozide, DDVP, Diazinon, Dimethoate, Ethoprop, Etofenprox, Etoxazole, Fenoxycarb, Fenpyroximate, Fipronil, Flonicamid, Fludioxonil, Hexythiazox, Imazalil, Imidacloprid, Kresoxim-methyl, Malathion, Metalaxyl, Methiocarb, Methomyl, Methyl parathion, MGK-264, Mycolubutanil, Naled, Oxamyl, Paclobutrazol, Permethrins, Phosmet, Piperonyl butoxide, Prallethrin, Propiconazole, Propxur, Pyrethrins, Spiromesifen, Spirotetramat, Pyridaben, Spinosad, Spiroxamine, Tebuconazole, Thiacloprid, Thiamethoxam, Trifloxystrobin
³³ Terpenes Include: alpha-Pinene, Camphene, beta-Pinene, beta-Myrcene, p-Cymene, Limonene, delta-3-Carene, 2-Carene, Eucalyptol, Linalool, cis-Ocimene, Borneol, Terpinen-4-ol, alpha-Terpineol, gamma-Terpineol, Methyl anthranilate, trans-Ocimene, Terpinolene, gamma-Terpinene, Fenchol, cis-2-Pinanol (v), Butanoic acid, hex es, alpha-Terpinene, alpha-Phallanderene, cis-b-Terpineol, Fenchone, Isopulegol, Isoborneol, Nebtjikm Camphor, Nerol, Geraniol, Pulegone)

Heavy Metals Test Includes (24 Heavy Metals): Beryllium, Aluminum, Vanadium, Chromium, Manganese, Cobalt, Nickel, Copper, Zinc, Arsenic, Selenium, Molybdenum, Palladium, Silver, Cadmium, Tin, Antimony, Barium Tungsten, Platinum, Thallium, Lead, Uranium, Mercury

Terpenes Include (33 terpenes): alpha-Pinene, Camphene, beta-Pinene, beta-Myrcene, p-Cymene, Limonene, delta-3-Carene, 2-Carene, Eucalyptol, Linalool, cis-Ocimene, Borneol, Terpinen-4-ol, alpha-Terpineol, gamma-Terpineol, Methyl anthranilate, trans-Ocimene, Terpinolene, gamma-Terpinene, Fenchol, cis-2-Pinanol (v), Butanoic acid, hex es, alpha-Terpinene, alpha-Phallanderene, cis-b-Terpineol, Fenchone, Isopulegol, Isoborneol, Nebtjikm Camphor, Nerol, Geraniol, Pulegone



Micro Comprehensive Package Includes: Aerobic Plate Count, Yeast and Mold, Total Coliform/E. coli, Pseudomonas, Staphylococcus, Bile Tolerant, E. coli, Salmonella

Micro Standard Package Includes: Aerobic Plate Count, Yeast and Mold, Total Coliform/E. coli



APPENDIX

TESTING OPTIONS

Terpenes			
1	alpha-Pinene	26	Isopulegol
2	Camphene	27	Isoborneol
3	beta-Pinene	28	Menthol
4	beta-Myrcene	29	Camphor
5	p-Cymene	30	Nerol
6	Limonene	31	Geraniol
7	delta-3-Carene	32	Pulegone
8	2-Carene	33	Caryophyllene
9	Eucalyptol	34	Guaiol
10	Linalool	35	alpha-Bisabolol
11	cis-Ocimene	36	Phytol
12	Borneol	37	cis-Nerolidol
13	Terpinen-4-ol	38	trans-Nerolidol
14	alpha-Terpineol	39	Caryophyllene Oxide
15	Methyl anthranilate	40	Germacrene B
16	trans-Ocimene	41	beta-Caryophyllene
17	Terpinolene	42	Geranyl Acetate
18	gamma-Terpinene	43	Cedrene
19	Fenchol	44	Humulene
20	cis-2-Pinanoli(v)	45	Farnasene
21	Butanoic acid, hex es	46	Valencene
22	alpha-Terpinene	47	Cedrol
23	alpha-Phallanderene	48	beta-Eudismol
24	cis-b-Terpineol	49	Isophytol
25	Fenchone		

Residual Solvents	
1	1,4 Dioxane
2	2-Butanol
3	2-Ethoxyethanol
4	2-Propanol (IPA)
5	Acetone
6	Acetonitrile
7	Benzene
8	Butanes
9	Cumene
10	Cyclohexane
11	Dichloromethane
12	Ethyl acetate
13	Ethyl ether
14	Ethylene glycol
15	Ethylene Oxide
16	Heptane
17	Hexanes
18	Isopropyl acetate
19	Methanol
20	Pentanes
21	Propane
22	Tetrahydrofuran
23	Toluene
24	Xylenes

24 Heavy Metals Panel	
1	Beryllium
2	Aluminum
3	Vanadium
4	Chromium
5	Manganese
6	Cobalt
7	Nickel
8	Copper
9	Zinc
10	Arsenic
11	Selenium
12	Molybdenum
13	Palladium
14	Silver
15	Cadmium
16	Tin
17	Antimony
18	Barium
19	Tungsten
20	Platinum
21	Thallium
22	Lead
23	Uranium
24	Mercury

Cannabinoids		
1	d9-THC	Delta-9 Tetrahydrocannabinoid
2	d8-THC -	Delta-8 Tetrahydrocannabinoid
3	THCA	tetrahydrocannabinolic acid
4	THCV	tetrahydrocannabivarin
5	CBD	cannabidiol
6	CBD-A	cannabidiolic acid
7	CBDV	cannabidvarin
8	CBDV-A	cannabidvarin acid
9	CBG	cannabigerol
10	CBG-A	cannabigerolic acid
11	CBN	cannabinol
12	CBC	cannabichromene

Microbial Comprehensive Package USP	
1	Aerobic Plate Count
2	Yeast and Mold
3	Total Coliforms/E. coli
4	Pseudomonas
5	Staphylococcus
6	Bile Tolerant
7	E. coli
8	Salmonella
Microbial Standard Package	
1	Aerobic Plate Count
2	Yeast and Mold
3	Total Coliforms/E. coli

APPENDIX

TESTING OPTIONS

Pesticide Panel (ORELAP)					
1	Abamectin	26	Fipronil	51	Spiromesifen
2	Acephate	27	Flonicamid	52	Spiromesifen
3	Acequinocyl	28	Fludioxonil	53	Spirotetramat
4	Acetamiprid	29	Hexythiazox	54	Spiroxamine
5	Aldicarb	30	Imazalil	55	Tebuconazole
6	Azoxystrobin	31	Imidacloprid	56	Thiacloprid
7	Bifenazate	32	Kresoxim-methyl	57	Thiamethoxam
8	Bifenthrin	33	Malathion	58	Trifloxystrobin
9	Boscalid	34	Metaxyl	59	Nicotine
10	Carbaryl	35	Methiocarb		
11	Carbofuran	36	Methomyl		
12	Chlorfenapyr	37	Methyl Parathion		
13	Chlorpyrifos	38	MGK-264		
14	Clofentezine	39	Myclobutanil		
15	Cyfluthrin	40	Naled		
16	Cypermethrin	41	Oxamyl		
17	Daminozide	42	Paclobutrazole		
18	Dichlorvos	43	Permethrins		
19	Diazinon	44	Phosmet		
20	Dimethoate	45	Piperonyl butox		
21	Ethopropho	46	Prellethrin		
22	Ethofenprox	47	Propiconazole		
23	Etoxazole	48	Pyrethrins		
24	Fenoxycarb	49	Pyridaben		
25	Fenpyroximate	50	Spinosad		

4 Metals Panel	
1	Lead
2	Mercury
3	Arsenic
4	Cadmium

APPENDIX TESTING OPTIONS

900+ Pesticides/Chemicals Scan

900+ Pesticides/Chemicals Scan

List 1 of 4

No.	Pesticide/Chemical	No.	Pesticide/Chemical	No.	Pesticide/Chemical	No.	Pesticide/Chemical
1	2-Ethyl-1,3-hexanediol	60	2,4'-Dichlorobenzophenone	120	Aziprotryne	180	Bromuconazole II
2	2,3,5-Trichlorophenol	61	2,6-Dichlorobenzamide	121	Azobenzene	181	Bufencarb
3	2,3,6-Trichloroanisole	62	2,6-Dichlorobenzonitrile	122	Azoxybenzene	182	Bupirimate
4	2,4-Dimethylaniline	63	2,6-Dimethylaniline	123	Azoxystrobin	183	Buprofezin
5	3-Chloro-4-methoxyaniline	64	3-Aminophenol	124	b-Estradiol	184	Butachlor
6	3-Indolylacetoneitrile	65	3-Chloro-4-fluoroaniline	125	Barban	185	Butafenacil
7	3,5-Dichloroaniline	66	3-Chloroaniline	126	Beflubutamid	186	Butamifos
8	Chloroneb	67	3-Hydroxycarbofuran	127	Benalaxyl	187	Butoxycarboxim
9	Flurochloridone, deschloro-	68	3-Trifluoromethylaniline	128	Benazolin-ethyl	188	Butralin
10	Folpet	69	3,4-Dichloroaniline	129	Bendiocarb	189	Butyl benzyl phthalate
11	Isofenphos-oxon	70	3,4,5-Trimethacarb	130	Benfluralin	190	Butylate
12	Isomethiozin	71	4-Aminodiphenyl	131	Benfuracarb	191	Butylated hydroxyanisole
13	Isoproturon	72	4-Bromoaniline	132	Benfuresate	192	Cadusafos
14	Mecarbam	73	4-Chloro-2-methylaniline	133	Benodanil	193	Cafenstrole
15	Metolachlor	74	4-Chloro-3-methylphenol	134	Benoxacor	194	Caffeine
16	Phenoxyacetic acid	75	4-Chloroaniline	135	Bentazone R	195	Captafol
17	Profenofos metabolite	76	4-Chlorophenyl isocyanate	136	Bentazone methyl derivative	196	Captan
18	1-naphthalenol	77	4-Isopropylaniline	137	Benthiocarb	197	Carbaryl
19	1,2-Dibromo-3-chloropropane	78	4-Methylphenol	138	Benzene, 1,3-bis(bromomethyl)	198	Carbetamide
20	1,2,4-Trichlorobenzene	79	4-Nitrophenol	139	Benzene sulfonamide	199	Carbofuran
21	1,3-Dichlorobenzene	80	4-Nonylphenol	140	Benzydine	200	Carbofuran-3-keto
22	1,3,5-Tribromobenzene	81	4,4'-Dichlorobenzophenone	141	Benzo(a)anthracene	201	Carbofuran-7-phenol
23	17a-Ethynylestradiol	82	4,4'-Oxydianiline	142	Benzo(a)pyrene	202	Carbophenothion
24	2-(1-naphthyl)acetamide	83	4,6-Dinitro-o-cresol (DNOC)	143	Benzo[b]fluoranthene	203	Carbosulfan
25	2-(2-Butoxyethoxy)ethyl	84	4,6-Dinitro-o-cresol (DNOC)	144	Benzo[g,h,i]perylene	204	Carboxin
26	2-(Octylthio)ethanol	85	5,7-Dihydroxy-4'-methoxyiso...	145	Benzo[k]fluoranthene	205	Carfentrazone-ethyl
27	2-[3-Chlorophenoxy]propiona	86	9,10-Anthraquinone	146	Benzophenone	206	Carpropamid
28	2-Chlorophenol	87	Acenaphthene	147	Benzoximate metabolite	207	Carvone
29	2-Ethyl-1,3-hexanediol	88	Acenaphthylene	148	Benzoylprop ethyl	208	Cashmeran
30	2-ethyl-6-methylaniline	89	Acephate	149	BenzyI benzoate	209	Cekafix
31	2-Hydroxyestradiol	90	Acequinocyl	150	BHC alpha isomer	210	Celestolide
32	2-Methylphenol	91	Acetamidrid	151	BHC beta isomer	211	Chinomethionat
33	2-Nitrophenol	92	Acetochlor	152	BHC delta isomer	212	Chloramben methyl ester
34	2-Phenoxypropionic acid	93	Acifluorfen methyl ester	153	BHC epsilon isomer	213	Chloranocryl
35	2,3,4,5-Tetrachloronitrobenz...	94	Acionifen	154	Bifenazate metabolite	214	Chlorbenside
36	2,3,4,5-Tetrachlorophenol	95	Acrinathrin	155	Bifenox	215	Chlorbenside sulfone
37	2,3,4,6-Tetrachlorophenol	96	Alachlor	156	Bifenthrin	216	Chlorbicyclen
38	2,3,5-Trichlorophenol	97	Aldrin	157	Binapacryl	217	Chlorbromuron
39	2,3,5-Trimethacarb	98	Allidochlor	158	Bioallethrin	218	Chlorbufam
40	2,3,5,6-Tetrachloro-p-terph...	99	Ametryn	159	Bioallethrin S-cyclopentenyl	219	Chlordecone
41	2,3,5,6-Tetrachlorophenol	100	Amidithion	160	Bioremethrin	220	Chlordene, trans-
42	2,3,7,8-Tetrachlorodibenzo-...	101	Aminocarb	161	Biphenyl	221	Chlordimeform
43	2,3,7,8-Tetrachlorodibenzof...	102	Amitraz	162	Bis(2-butoxyethyl) phthalate	222	Chlorethoxyfos
44	2,4-D methyl ester	103	Amitraz metabolite	163	Bis(2-ethylhexyl)phthalate	223	Chlorfenapyr
45	2,4-D sec-butyl ester	104	Ancymidol	164	Bis(2,3,3,3-tetrachloroprop...	224	Chlorfenethol
46	2,4-DB methyl ester	105	Anilazine	165	Biisphenol A	225	Chlorfenprop-methyl
47	2,4-Dichlorophenol	106	Aniline	166	Bitertanol I	226	Chlorfenson
48	2,4-Dichlorophenyl benzenes	107	Anilofos	167	Bitertanol II	227	Chlorfenvinphos
49	2,4-Dimethylphenol	108	Anthracen	168	Boscalid (Nicobifen)	228	Chlorfenvinphos, cis-
50	2,4,5-T methyl ester	109	Aramite I	169	Bromacil	229	Chlorfenvinphos, trans
51	2,4,5-Trichloro-p-terphenyl	110	Aramite II	170	Bromfenvinphos-(Z)	230	Chlorfluorecol-methyl ester
52	2,4,5-Trichloroaniline	111	Atraton	171	Bromfenvinphos-E	231	Chlormefos
53	2,4,5-Trichlorophenol	112	Atrazine	172	Bromobutide	232	Chlornitrofen
54	2,4,5-Trimethylaniline	113	Atrazine-desethyl	173	Bromocyclen	233	Chlorobenzilate
55	2,4,5,6-Tetrachloro-m-xylene	114	Azaconazole	174	Bromophos	234	Chloropropylate
56	2,4,6-Tribromoanisole	115	Azamethiphos	175	Bromophos-ethyl	235	Chlorothalonil
57	2,4,6-Tribromophenol	116	Azibenzolar-S-methyl	176	Bromopropylate	236	Chlorotoluron
58	2,4,6-Trichloroanisole	117	Azinphos-ethyl	177	Bromoxynil	237	Chlorpropham
59	2,4,6-Trichlorophenol	118	Azinphos-methyl	178	Bromoxynil octanoic acid ester	238	Chlorpyrifos
		119	Aziprotryn metabolite	179	Bromuconazole I	239	Chlorpyrifos Methyl

APPENDIX TESTING OPTIONS

900+ Pesticides/Chemicals Scan

900+ Pesticides/Chemicals Scan

List 2 of 4

No.	Pesticide/Chemical	No.	Pesticide/Chemical	No.	Pesticide/Chemical	No.	Pesticide/Chemical
240	Chlorthal-dimethyl	300	Di-allate II	360	Dinocap I	420	Ethoxyquin
241	Chlorthiamid	301	Di-n-butylphthalate	361	Dinocap II	421	Ethyleneurea
242	Chlorthion	302	Di-n-hexyl phthalate	362	Dinocap III	422	Etoxazole
243	Chlorthiophos	303	Di-n-nonyl phthalate	363	Dinocap IV	423	Etridiazole
244	Chlorthiophos sulfone	304	Di-n-octyl phthalate	364	Dinoseb	424	Etridiazole, deeschloro-
245	Chlorthiophos sulfoxide	305	Di-n-propyl phthalate	365	Dinoseb acetate	425	Etrinfos
246	Chlomezate	306	Dialifos	366	Dinoseb methyl ether	426	Eugenol
247	Chrysene	307	Diamyl phthalate	367	Dinoterb	427	Exaltolide
248	Cinerin I	308	Diazinon	368	Dinoterb acetate	428	Famoxadon
249	Cinerin II	309	Diazinon-oxon	369	Diofenolan I	429	Famphur
250	Cinidon-ethyl	310	Dibenz[a,h]anthracene	370	Diofenolan II	430	Fenamidone
251	cis-Chlordane	311	Dicamba	371	Dioxabenzofos	431	Fenamiphos sulfoxide
252	Clodinafop-propargyl	312	Dicamba methyl ester	372	Dioxacarb	432	Fenamiphos-sulfone
253	Clomazone	313	Dicaphon	373	Dioxathion	433	Fenarimol
254	Cloquintocet-mexyl	314	Dichlofenthion	374	Diphacinone	434	Fenazaflor
255	Coumaphos	315	Dichlofluanid	375	Diphenamid	435	Fenazaflor metabolite
256	Crimidine	316	Dichlofluanid metabolite	376	Diphenyl phthalate	436	Fenazaquin
257	Cratophos	317	Dichlorone	377	Diphenylamine	437	Fenbuconazole
258	Cruformate	318	Dichlorimid	378	Dipropetryn	438	Fenchlorazole-ethyl
259	Cyanazine	319	Dichlorophen	379	Dipropyl isocinchomeronate	439	Fenchlorphos
260	Cyanofenphos	320	Dichlorprop	380	Disulfoton	440	Fenchlorphos-oxon
261	Cyanophos	321	Dichlorprop methyl ester	381	Disulfoton sulfone	441	Fenclorim
262	Cyclofuramid	322	Dichlorvos	382	Ditalimfos	442	Fenfuram
263	Cycloate	323	Diclobutrazol	383	Dithiopyr	443	Fenhexamid
264	Cyclopentadecanone	324	Diclocymet I	384	Diuron	444	Fenitrothion
265	Cycluron	325	Diclocymet II	385	Diuron Metabolite	445	Fenitrothion-oxon
266	Cyflufenamid	326	Diclofop methyl	386	Dodemorph I	446	Fenobucarb
267	Cyfluthrin I	327	Dicloran	387	Dodemorph II	447	Fenoprop
268	Cyfluthrin II	328	Dicrotophos	388	Drazoxolon	448	Fenoprop methyl ester
269	Cyfluthrin III	329	Dicyclohexyl phthalate	389	Edifenphos	449	Fenothiocarb
270	Cyfluthrin IV	330	Dicyclopentadiene	390	Empenthrin I	450	Fenoxanil
271	Cyhalofop-butyl	331	Dieldrin	391	Empenthrin II	451	Fenoxaprop-ethyl
272	Cyhalothrin (Gamma)	332	Diethylatyl ethyl	392	Empenthrin III	452	Fenoxycarb
273	Cyhalothrin I (lambda)	333	Diethofencarb	393	Empenthrin IV	453	Fenpiclonil
274	Cymiazole	334	Diethyl dithiobis	394	Empenthrin V	454	Fenpropathrin
275	Cymoxanil	335	Diethyl phthalate	395	Endosulfan (alpha isomer)	455	Fenpropidin
276	Cypermethrin I	336	Diethylene glycol	396	Endosulfan (beta isomer)	456	Fenson
277	Cypermethrin II	337	Diethylstilbestrol	397	Endosulfan ether	457	Fensulfathion
278	Cypermethrin III	338	Difenoconazol I	398	Endosulfan lactone	458	Fensulfathion-oxon
279	Cypermethrin IV	339	Difenoconazol II	399	Endosulfan sulfate	459	Fensulfathion-oxon -sulfone
280	Cyphenothrin cis-	340	Difenoxuron	400	Endrin	460	fensulfathion-sulfone
281	Cyphenothrin trans-	341	Diffufenican	401	Endrin aldehyde	461	Fenthion
282	Cyprazine	342	Diisobutyl phthalate	402	Endrin ketone	462	Fenthion sulfoxide
283	Cyproconazole	343	Dimefox	403	EPN	463	Fenthion-sulfone
284	Cyprodinil	344	Dimepiperate	404	Epoxiconazole	464	Fenuron
285	Cyprofluram	345	Dimethachlor	405	EPTC	465	Fenvalerate I
286	Cyromazine	346	Dimethametryn	406	Erbon	466	Fenvalerate II
287	d-(cis-trans)-Phenothrin-I	347	Dimethenamid	407	Esfenvalerate	467	Fenpropimorph
288	d-(cis-trans)-Phenothrin-II	348	Dimethipin	408	Espirocarb	468	Fipronil
289	Dazomet	349	Dimethoate	409	Etaconazole	469	Fipronil-sulfide
290	DDMU [1-Chloro-2,2-bis	350	Dimethomorph-(Z)	410	Ethalfuralin	470	Fipronil-sulfone
291	Decachlorobiphenyl	351	Dimethomorph-€	411	Ethidimuron	471	Fipronil, Desulfinyl-
292	Deltamethrin	352	Dimethylphthalate	412	Ethiofencarb	472	Flamprop-isopropyl
293	Demaphion	353	Dimethylvinphos(Z)	413	Ethiolate	473	Flamprop-methyl
294	Demeton-S	354	Dimethylvinphos€	414	Ethion	474	Fluacrypyrim
295	Demeton-S-methylsulfon	355	Dimetilan	415	Ethofenprox	475	Fluazifop-p-butyl
296	Deebromo-bromobutide	356	Dimoxystrobin	416	Ethofumesate	476	Fluazinam
297	Deemedipham	357	Diniconazole	417	Ethofumesate, 2-Keto	477	Fluazolate
298	Deemetryn	358	Dinitramine	418	Ethoprophos	478	Flubenzimine
299	Di-allate I	359	Dinobuton	419	Ethoxyfen-ethyl	479	Fluchloralin

APPENDIX TESTING OPTIONS

900+ Pesticides/Chemicals Scan

900+ Pesticides/Chemicals Scan

List 3 of 4

No.	Pesticide/Chemical	No.	Pesticide/Chemical	No.	Pesticide/Chemical	No.	Pesticide/Chemical	No.	Pesticide/Chemical
480	Flucythrinate I	540	Ioxynil octanoate	600	Methomy	700	PCB 77	760	Prometon
481	Flucythrinate I	541	Iproconazole	601	Methoprene I	701	PCB 81	761	Prometryn
482	FludioxonilA R	542	Iprobenfos	602	Methoprene II	702	Pebulate	762	Propachlor
483	Flufenacet	543	Iprodione	603	Methoprotirne	703	Penconazole	763	Propamocarb
484	Flumetralin	544	Iprovalicarb I	604	Methoxychlor	704	Pendimethalin	764	Propanil
485	Flumiclorac-pentyl	545	Iprovalicarb II	605	Methoxychlor olefin	705	Pentachloroaniline	765	Propaphos
486	Flumioxazin	546	Irgarol	606	Methyl (2-naphthoxy)acetate	706	Pentachloroanisole	766	Propargite
487	Flumeturon	547	Isazophos	607	Methyl paraoxon	707	Pentachlorobenzene	767	Propargite metabolite
488	Fluoranthene	548	Isobenzan	608	Methyl parathion	708	Pentachloronitrobenzene	768	Propazine
489	Fluoren	549	Isobornyl thiocyanacetate	609	Methyl-1-naphthalene acetate	709	Pentachlorophenol	769	Propetamphos
490	Fluorodifen	550	Isocarbamide	610	Methyldymron	710	Pentachlor	770	Propham
491	Fluoroglycofen-ethyl	551	Isocarbophos	611	Metobromuron	711	Permethrin I	771	Propiconazole-I
492	Fluoromide	552	Isodrin	612	Metolcarb	712	Permethrin II	772	Propiconazole-II
493	Fluotrimazole	553	Isufenphos	613	Metominostrobin E	713	Perthane	773	Propisochlor
494	Fluoxastrobin cis	554	Isoprocarb	614	Metominostrobin (Z) R	714	Phantolide	774	Propoxur
495	Fluquinconazole	555	Isopropalin	615	Metrafenone	715	Phenamiphos	775	Propyzamide
496	Flurenol-butyl ester	556	Isoprothiolane	616	Metribuzin	716	Phenanthrene	776	Prosulfocarb
497	Flurenol-methylester	557	Isoxaben	617	Mevinphos	717	Phenanthrene-d10	777	Prothioconazole-deethio
498	Fluridone	558	Isxadifen-ethyl	618	Mirex	718	Phenkapton	778	Prothiofos
499	Flurochloridone I	559	Isoxaflutole	619	Molinate	719	Phenol	779	Prothoate
500	Flurochloridone II	560	Isoxathion	620	Monalide	720	Phenothiazine	780	Pyracarbolid
501	Fluroxypyr-1-methylheptyl	561	Jasmodin I	621	Monocrotophos	721	Phenothrin I	781	Pyraclafos
502	Flurprimidol	562	Jasmodin II	622	Monolinuron	722	Phenothrin II	782	Pyraflufen-ethyl
503	Flurtamone	563	Jodfenphos	623	Musk amberette	723	Phenthioate	783	Pyrazon
504	Flusilazole	564	Kinoprene	624	Musk Ketone	724	Phorate	784	Pyrazophos
505	Fluthiacet-methyl	565	Kresoxim-methyl	625	Musk Moskene	725	Phorate sulfone	785	Pyrazoxyfen
506	Flutolanil	566	Lactofen	626	Musk Tibetene (Moschustibeten)	726	Phorate sulfoxide	786	Pyrene
507	Flutriafol	567	Lenacil	627	Musk xylene	727	Phorate-oxon	787	Pyrethrin I
508	Fluvalinate-tau-I	568	Leptophos	628	Myolobutanil	728	Phosalone	788	Pyrethrin II
509	Fluvalinate-tau-II	569	Leptophos oxon	629	N-1-Naphthylacetamide	729	Phosfolan	789	Pyributicarb
510	Fonofos	570	Lindane	630	N-Methyl-N-1-naphthyl aceta	730	Phosmet	790	Pyridaben
511	Formothion	571	Linuron	631	N,N-Diethyl-m-toluamide	731	Phosphamidon I	791	Pyridaphenthion
512	Foethiazate I	572	m-Cresol	632	Naled	732	Phosphamidon II	792	Pyridate
513	Foethiazate II	573	Malathion	633	Naphthalene	733	Phthalide	793	Pyridintri
514	Fuberidazole	574	Malathion-o-analog	634	Naphthalic anhydride	734	Phthalimide	794	Pyrifinox I
515	Furalaxyl	575	MCPA methyl ester	635	Napronilide	735	Picloram methyl ester	795	Pyrifinox II
516	Furathiocarb	576	MCPA-butoxyethyl ester	636	Napropamide	736	Picolinafen	796	Pyritolid
517	Furilazole	577	MCPB methyl ester	637	Nicotine	737	Picoxystrobin	797	Pyrimethanil
518	Furmecyclo	578	Mecoprop methyl ester	638	Nitralin	738	Pindone	798	Pyrimidifen
519	Halfenprox	579	Mefenacet	639	Nitrapyrin	739	Piperalin	799	Pyriminobac-methyl (Z)
520	Haloxypyr-methyl	580	Mefenpyr-diethyl	640	Nitrobenzene-d5	740	Piperonyl butoxide	800	Pyriminobac-methyl E
521	Heptachlor	581	Meftuide	641	Nitrofen	741	Piperophos	801	Pyriproxifen
522	Heptachlor epoxide isomer A	582	Menazon	642	Nitrothal-isopropyl	742	Pirimicarb	802	Pyroquilon
523	Heptachlor exo-epoxide isom...	583	Mepanipyrim	643	Nonachlor, cis-	743	Pirimiphos-ethyl	803	Quinalphos
524	Heptenophos	584	Mephosfolan	644	Nonachlor, trans-	744	Pirimiphos-methyl	804	Quinoclamine
525	Hexabromobenzene	585	Mepronil	645	Norflurazon	745	Plifenat	805	Quinoxifen
526	Hexachlorobenzene	586	Metalaxyl	646	Norflurazon, Desmethyl-	746	Potasan	806	Quintozene metabolite
527	Hexachlorophene	587	Metamitron	647	Nuarimol	747	Prallethrin, cis-	807	Quizalofop-ethyl
528	Hexaconazole	588	Metaeyetox thiol	648	o-Danieldine	748	Prallethrin, trans-	808	Rabenzazole
529	Hexazinone	589	Metazachlor	649	o-Dichlorobenzene	749	Pretilachlor	809	Reemethrin
530	Hexestrol	590	Metconazole I	650	o-Phenylphenol	750	Probenazole	810	Reemethrin
531	Hydroprene	591	Metconazole I	651	o,p'-DDD	751	Prochloraz	811	Reemethrine II
532	Imazalil	592	Methabenzthiazuron	652	o,p'-DDE	752	Procymidone	812	Rotenone
533	Imazamethabenz-methyl I	593	Methacrifos	653	o,p'-DDT	753	Prodiamine	813	S.S.S-Tributylphosphorotrit.
534	Imazamethabenz-methyl II	594	Methamidophos	654	Octachlorostyrene	754	Profenofos	814	Schradan
535	Imibenconazole	595	Methfuroxam	655	Ofurace	755	Profluralin	815	Sebutylazine
536	Imibenconazole-desbenzyl	596	Methidathion	656	Omethoate	756	Prohydrojasmon I	816	Sebutylazine-desethyl
537	Indero[1,2,3-cd]pyrene	597	Methiocarb	657	Orbencarb	757	Prohydrojasmon II	817	Sebumeton
538	Indoxacarb and Dioxacarb	598	Methiocarb sulfone	658	ortho-Aminoazotoluene	758	Promecarb	818	Silafluofen
539	Ioxynil	599	Methiocarb sulfoxide	659	Oryzalin	759	Promecarb artifact	819	Silthiopham

APPENDIX TESTING OPTIONS

900+ Pesticides/Chemicals Scan

900+ Pesticides/Chemicals Scan

List 4 of 4

No.	Pesticide/Chemical	No.	Pesticide/Chemical
820	Simazine	880	Tolyfluanid metabolite (DMST)
821	Simeconazole	881	Tolyltriazole
822	Simetryn	882	Tolyltriazole
823	Spirodiclofen	883	Tonalide
824	Spiromesifen	884	Toxaphene Parlar 26
825	Spiroxamine I	885	Toxaphene Parlar 50
826	Spiroxamine II	886	Toxaphene Parlar 62
827	Spiroxamine metabolite	887	trans-Chlordane
828	Sudan I	888	Transfluthrin
829	Sudan II	889	Traseolide
830	Sudan Red	890	Tri-allate
831	Sulfallate	891	Triadimefon
832	Sulfanilamide	892	Triadimenol
833	Sulfentrazone	893	Triamphos
834	Sulfotep	894	Triapenthenol
835	Sulfur (S8)	895	Triazamate
836	Sulprofos	896	Triazophos
837	Swep	897	Tributyl phosphate
838	Tamoxifen	898	Tributyl phosphorotrithioite
839	TCMTB	899	Trichlamide
840	Tebuconazole	900	Trichlorfon
841	Tebufenpyrad	901	Trichloronat
842	Tebupirimifos	902	Triclopyr methyl ester
843	Tebutam	903	Triclosan
844	Tebuthiuron	904	Triclosan-methyl
845	Tecnazene	905	Tricreylphosphate, meta-
846	Tefluthrin, cis-	906	Tricreylphosphate, ortho-
847	Temephos	907	Tricreylphosphate, para
848	Terbacil	908	Tricyclazole
849	Terbucarb	909	Tridemorph , 4-tridecyl-
850	Terbufos	910	Tridiphane
851	Terbufos-oxon-sulfone	911	Trietazine
852	Terbufos-sulfone	912	Triethylphosphate
853	Terbumeton	913	Trifenmorph
854	Terbuthylazine	914	Trifloxystrobin
855	Terbuthylazine-deesethyl	915	Triflumizole
856	Terbutryn	916	Trifluralin
857	Tetrachlorvinphos	917	Triphenyl phosphate
858	Tetraconazole	918	Tris(2-butoxyethyl) phosphate
859	Tetradifon	919	Tris(2-chloroethyl) phosphate
860	Tetraethylpyrophosphate	920	Tris(2-ethylhexyl) phosphate
861	Tetrahydrophthalimide	921	Triticonazole
862	Tetramethrin I	922	Tryclopributoxyethyl
863	Tetramethrin II	923	Tycor (SMY 1500)
864	Tetrapropyl thiodiphosphate	924	Uniconazole-P
865	Tetraul	925	Vamidothion
866	Thenylchlor	926	Vernolate
867	Theobromine	927	Vinclozolin
868	Thiabendazole	928	XMC
869	Thiazopyr	929	XMC
870	Thifluzamide	930	Zoxamide



Companies that order our Purity Tested™ Package (900+compounds) are authorized to use our proprietary Purity Tested™ seal and also receive substantial discounts on our proprietary 24 metal analysis.

SAMPLE PRIVACY

At Purity, we understand how important privacy is to our customers, which is exactly why we've made it a priority to provide full confidentiality to all of our partners over the past five decades. We've achieved this by establishing not only the right systems, but also the right team to oversee the handling of your product. The graph below highlights how we preserve the anonymity and integrity of your samples.

SAMPLE ENTRY	Purity's well trained receiving staff processes all samples received by 2 p.m. on the same day. We receive most samples by UPS, Fedex or drop-offs.	Analysis deadlines are prioritized based on the date received or requested or requested turnaround time. We will call you if clarification is required.	Information you provided on our Chain of Custody form is entered in our LIM system to ensure we test your sample according to your specifications. Your sample is assigned a unique ID # to track its movement through our lab.
SAMPLE HANDLING	Samples are homogenously prepared as a composite or individually if instructed by our customer.	Homogenized samples are placed in special, sealed containers and stored in appropriate conditions until analyzed. A portion of the sample is stored for reference for 60 days.	Samples are labeled with their assigned unique ID #s to ensure that the correct data from our LIMS system for that sample will be used during analysis..
LABORATORY TESTING	Samples are pulled from storage for analyses. Tests are performed according to Purity's approved methods by our lab technicians.	Tests results are calculated primarily by our LIMS system that generates a printed report. The test results and report are reviewed by the lab technician before submission for final review.	Purity's administrative staff compiles the test results with all related documents for review by our QC department and approved for release to the customer if correct.
REPORTING RESULTS	Customers choose the method that they want to receive their test results, either by e-mail, mail, fax or by access through our website.	If you have questions about your test results, please contact our Laboratory Manager at 503.297.3636 (switchboard) or 503.974.0925.	

1. Sample Size Requirements

Test	Matrix/Same Size (g)	
	Extract/Oil	Flower (wet/dry)
E. Coli/Coliforms/Mold	11g	11g/11g
Salmonella	10g	10g/10g
Heavy Metals	1g	25g/25g
Potency (Cannabinoids)	1g	25g/25g
Pesticides (59)	1g	25g/25g
Pesticides (900+)	1g	25g/25g
Residual Solvents	1g	25g/25g
Terpenes	1g	25g/25g

2. Sample Containers:

- Flower: Zip lock bag or other air tight packaging. Ship on ice for wet flowers.
- Extract Oil: Leak proof plast containers (50 ml. test tubes work best).
- Powder: Air tight container with leak proof cap or closure.

3. ID Your Sample:

- Label primary sample container with a unique item description or identification number.

4. Use Outer Container:

- Place primary sample container in second spill proof container or zip lock bag.

5. Paperwork

- Complete Purity Laboratories' Chain of Custody form and include with shipment. (You can download this form from our website at www.puritylabsinc.com).

6. Shipping:

- Shipping samples cold is recommended to prevent decomposition during transit.
- Overnight shipping is required for wet flowers.
- Weekend deliveries are not accepted, except by prior arrangement.

7. Ship Samples to:

Attention: Sample Receipt
Purity Laboratories
17387 SW 63rd Ave.
Lake Oswego, OR 97035

Analytical Request Form / Chain of Custody

17387 SW 63rd Ave.
Lake Oswego, Oregon 97035
Phone #: 503-297-3636
Fax #: 503-297-3738
www.puritylabsinc.com

General Instructions: Please complete this form and send along with samples to the above address. * - Required Information				Turnaround Time*			
				<input type="checkbox"/> Standard within 10 business days depending on requested tests		<input type="checkbox"/> Rush (Fee Applies) Call for availability – applies to chemistry testing only	
Client Information*				Billing Information* <input type="checkbox"/> Same as Client			
Contact:				Contact:			
Company:				Address:			
Address:							
				PO #:			
Email:				Email:			
Phone #:		Fax #:		Phone #:		Fax #:	
Report*	<input type="checkbox"/> Email <input type="checkbox"/> Fax	Additional Report Recipients				Invoice*	<input type="checkbox"/> Email <input type="checkbox"/> Mail

Enter description and any other important information regarding test samples below. This information will appear on lab report. Use another form for additional samples.

About the sample	Sample #1	Sample #2	Sample #3	Sample #4	Sample #5
Description*					
Lot Number					
Date & Time Sampled					
Requested Test(s)* with Purity Test Number*, include methods and/or specifications, if necessary					

Notes/Special Instructions

Relinquished By (Client)*		Received By (Lab use only):	
Signature: _____		Signature: _____	
Print: _____		Print: _____	
Date: _____ Time: _____		Date: _____ Time: _____	

Note: Client signature on this form and/or submission indicates authorization for analysis to proceed and acceptance of Purity Laboratories standard terms and conditions.

1. **Scope:** This document establishes Terms and Conditions of Service for K & D Laboratories, an Oregon corporation (dba Purity Laboratories (Purity)), which provides laboratory testing and other services to its customers (each a Customer).
2. **Contract:** The Terms and Conditions of Service (Terms and Conditions) as described in this document are considered accepted by the Customer upon submission of an account application, Purity's LF1000 Analytical Request/Chain of Custody Form (Chain of Custody Form), or delivery of any sample to Purity and shall exclusively apply to all contracts between Purity and its customers. The Terms and Conditions described herein prevails over any Customer documents, except as agreed to by Purity in writing. Understanding Purity's Terms and Conditions is the responsibility of the Customer. The most current Terms and Conditions will be published by Purity on its website at www.puritylabsinc.com.
3. **Submission of Samples:** To order services from Purity, the Customer must submit a completed Chain of Custody Form with each sample submitted for testing. The Chain of Custody Form is intended to record the movement of samples from collection to receipt at Purity and it also intends to serve as instructions and a purchase order for laboratory services. If the Chain of Custody Form is not filled out completely by the Customer or completed incorrectly, the sample will be set aside until the complete and correct information is obtained. Purity disclaims responsibility of testing delays that may occur because of receiving an incomplete or incorrect Chain of Custody Form from the Customer. To be a completed form, information regarding the following must be provided: Customer Name, Address, Telephone and Fax Numbers, Contact Person, Purchase Order Number, Unique Sample Description, Lot # and a detailed list of all tests that the Customer wants Purity to perform on the sample including the estimated analysis level(s) if known.
4. **Sample Selection, Containment and Transport:** Customers are responsible for shipping samples to Purity to minimize contamination from containers or degradation from transport or improper handling also refrigeration, if required. The Customer should also ensure that samples submitted are representative of its product both in nature and in packaging. If multiple tests are required for the same lot of product, the Customer should provide multiple quantities of the sample as described on the Chain of Custody Form. The samples should be sent to Purity in air/leak proof protective containers. Any sample containing a potentially hazardous chemical should be sent in a container especially designed for protection specifically from that hazardous chemical. The Customer must receive Purity's written consent to receive a hazardous chemical for testing, prior to shipment and adhere to U.S. Food and Drug Administration (FDA) and/or U.S. Department of Agriculture (USDA) sampling guidelines where applicable.
5. **Sample Acceptance:** Only samples received that meet Purity's criteria for acceptance will be processed and tested. Purity reserves the right to refuse or reject any sample and will notify the Customer should this occur. If the Customer requests that the rejected sample be returned, Purity will return the sample if possible. A handling fee for the return service may be charged.
6. **Sample Retention:** Purity normally retains samples for 14 days from the time they arrive except for perishable items, which will be destroyed after testing is completed. Purity retains the right to remove or dispose of samples that are rotten prior to the 14 days.
7. **Testing Methods:** Purity testing is generally conducted by testing procedures established by AOAC, USP, FDA, USDA or EPA or other procedures that Purity has developed for the type of sample tested.
8. **Test Reports:** After testing, Purity will send the Customer a test report by e-mail or if the customer prefers by mail or both. For some tests, test reports are accessible on our website at www.puritylabsinc.com. Purity will follow guidance provided by the Customer on Purity's Chain of Custody Form to ensure that the Customer receives testing as ordered.
9. **Turnaround Times:** Current turnaround times are available by calling Purity at 503.297-3636 or on our website at www.puritylabsinc.com. Rush fees may be applied for samples requested in 1-3 days. Turnaround times are estimates and Purity shall make commercially reasonable efforts to meet its estimated deadlines. If a test is delayed for more than 2 days beyond Purity's normal turnaround times, the Customer will be notified then or earlier if possible. If sample material is provided in insufficient amounts, Purity will contact the customer to request that additional material be provided. A new deadline for test results will be established based on the receipt of adequate sample material to conduct the requested test.
10. **Rush Testing:** Rush testing is available, subject to laboratory capacity, for an additional surcharge, normally double the published price for the test or

- more if the rush will cause excessive disruption to Purity's business.
11. **Hazardous Materials:** Hazardous materials include a wide range of materials identified by local, state and federal governments. As mentioned in paragraph 4, it is the Customer's responsibility to inform Purity of any hazardous material shipped to Purity to be tested or for any other reason. Any damages arising from or relating to a Customer's failure to disclose a hazardous material will be the will be financial responsibility of the Customer. This can include medical expenses, clean-up and recovery expenses and administrative expenses relating to the damages caused by the Customer's failure to disclose a potentially hazardous material it sends to Purity.
12. **Fees for Services:** Lab tests are charged at current published rates unless Purity agrees to other negotiated prices in writing and signed by the Lab Manager, CEO or President of Purity. Purity's current price list should be available on Purity's website at www.puritylabsinc.com. Pricing for tests that are not listed but may be available or developed for a Customer will be quoted, in writing by Purity.
13. **Payment Terms:** Payment is due on receipt of Purity's invoice to a Customer, unless approved for Net 30 day terms by Purity. To qualify for Net 30 day terms, a Customer must complete and submit Purity's Application for Credit Form for review and approval by Purity. If credit terms are extended to a customer, Purity will confirm those terms in writing to the customer by e-mail or mail.
14. **Invoices and Payments:** All prices quoted or otherwise specified by Purity are exclusive of taxes. If Purity is required to collect any taxes from a Customer with respect to the services, such amounts will be added to the Customer's invoice. Purity will invoice a Customer following approval for release by its QC department. Purity will charge interest on past due amounts at the rate of one and one-half percent (1 1/2%) per month or the maximum rate allowed by law, whichever is less. Delinquent accounts (those with unpaid invoices over 90 days old) may be referred to an outside collection agency and/or attorney, and Customer shall pay all associated collection expenses, including agency fees, attorneys' fees, and court costs.
15. **Warranties:** Purity warrants that it will report test results "as is" and without additional warranties of any kind. If the Customer requires specific detection limits, it is the Customer's responsibility to ensure that Purity can meet those limits before submitting the sample to be tested. The Customer's sole and exclusive remedy for any breach by Purity will be to have a sample retested, providing Purity has adequate material for the retesting or if not, the Customer provides additional sample material to test.
16. **Subcontracting:** Purity may subcontract Services to third party laboratories to meet all a Customer's requirements for testing. Use of subcontractors must be approved by the Customer. All warranty disclaimers, limitations of liability and other restrictions in this agreement will apply to any subcontractor's test results and other services.
17. **Litigation Costs:** The Customer will reimburse Purity for all costs incurred by Purity and/or its subcontractors, for responding to any subpoena or any other legal process relating to the test results or other services provided to the Customer. Costs for time spent will be calculated based on the hourly rate schedules for any of Purity's employees, officers, contractors or advisors.
18. **Indemnity and Insurance:** The Customer agrees to defend, indemnify, and hold harmless Purity, its affiliates, its subcontractors, their respective successors and permitted assigns, and all of their respective directors, officers, shareholders, members, employees, representatives, and agents (collectively, the "Indemnitees") from and against any and all claims, actions, suits, proceedings, demands, losses, fines, damages, costs, (including, without limitation, reasonable attorneys' fees, expert witness fees, and court costs), and other remedies of any kind or nature (whether based on tort, contract, warranty, products liability, strict liability, trade, regulatory, or other law) arising from or otherwise relating to any Customer product or service, including without limitation any claim or allegation that any Customer product or service was or is dangerous; defective in design, ingredients, manufacture, production, bottling, packaging, or otherwise; unsafe; unfit for consumption or use; otherwise unfit; defectively or otherwise improperly labeled, packaged, shipped, or otherwise transported; negligently, fraudulently, or otherwise improperly advertised, marketed, or promoted; or otherwise injured, harmed, or damaged any person or property in any way (individually a "Claim" and collectively "Claims"). Purity agrees to (i) provide its Customers with notice of a Claim within ten (10) days after being formally served therewith; (ii) provide the Customer the opportunity to defend and settle the Claim, except that the Customer shall not settle the Claim without the prior written consent of Purity, and (iii) provide reasonable assistance to the Customer, at the Customer's request and expense, to defend against the Claim. Purity will have the right, in its sole discretion, to participate in the

defense of the Claim, at its own expense, through counsel of its own choosing.

19. **Insurance Coverage:** Without limiting the generality of the previous paragraph, the Customer represents and warrants to Purity that (i) the Customer has and will maintain products liability insurance with an A.M. Best A+ or better rated carrier providing protection and adequate coverage with respect to any and all claims, liabilities, damages, costs, and expenses arising out of or otherwise relating to any defects or alleged defects in Customer's products; (ii) such products liability insurance includes coverage for additional insureds that include the Indemnitees; and (iii) the Customer will notify Purity within ten (10) days of any cancellation, modification, or reduction of such insurance coverage. In addition to any other remedies available, Purity reserves the right to terminate all Services for Customer in the event of any breach of the foregoing warranties or for the cancellation of any such insurance coverage or any gap in such coverage.
20. **Assignment:** Neither party may assign this agreement without the other party's written consent, which shall not be unreasonably withheld. This agreement shall be binding on and inure to the benefit of each of the parties' successors and permitted assigns, if any. The Customer will inform Purity of any change of ownership or control of Customer, whether by merger, stock sale, or otherwise, and Purity shall have the right, in its sole discretion, to terminate this agreement or revoke Customer's credit account.
21. **Relationship of the Parties:** The relationship of the parties established by this agreement is that of independent contractors, and nothing contained in this agreement shall be construed (a) to give either party the power to direct and control the day-to-day activities of the other, (b) to constitute the parties as partners, joint venturers, co-owners, or participants in any joint or common undertaking, or (c) to allow either party to act as an agent of the other or otherwise to create or assume any obligation on behalf of the other party.
22. **Notices.** Notices shall be made in writing, shall be sent by email, facsimile, certified mail, hand delivery, or express carrier, and will be effective upon receipt.
23. **Compliance with Laws:** Each party agrees to comply with all federal, state, and local laws applicable to its performance of this agreement.
24. **Non-Waiver:** Any failure or delay by either party to exercise or partially exercise any right, power or privilege under this agreement shall not be deemed a waiver of thereof.
25. **Severability.** If a court of competent jurisdiction finds any provision of this agreement to be void, invalid, illegal or unenforceable, the provision will be limited, modified, or if necessary severed, to the extent necessary to eliminate its violability, invalidity, illegality, or unenforceability, and the other provisions hereof shall remain unaffected. Any void, invalid, illegal, or unenforceable provision will be replaced by the parties by a legal and enforceable closest in operation and effect to the void, invalid, illegal, or unenforceable provision.
26. **Force Majeure:** A party's failure to perform in timely fashion shall not be a breach of this agreement if such failure to perform results from circumstances beyond the party's reasonable control, including, but not limited to, labor disputes, civil disturbances, acts or non-actions of governmental authorities or suppliers, epidemics, war, embargoes, severe weather, fire, earthquakes, Internet outage, Acts of God, or default of a common carrier. This provision shall not apply, however, to the Customer's payment obligations to Purity.
27. **Governing Law:** This agreement shall be governed by and interpreted in accordance with the laws of the State of Oregon, excluding its conflicts of law rules. Exclusive jurisdiction and venue for any disputes arising or relating to this agreement shall be in the federal and state courts sitting in Portland, Oregon and each party irrevocably consents to such jurisdiction and venue. The party that substantially prevails in any action or proceeding brought with respect to this agreement will be entitled to recover, in addition to any other relief, its costs and reasonable attorneys' fees. Each party irrevocably waives the right to a trial by jury in any and all actions or proceedings brought under or with respect to this agreement.
28. **Survival of Terms:** The provisions of the agreement that by their nature extend beyond the termination of this agreement will survive and remain in effect until all obligations are satisfied.
29. **Entire Agreement.** This agreement constitutes the entire agreement between the parties as to the subject matter hereof and supersedes all prior written and oral communications, agreements, representations, warranties, statements, negotiations, understandings, and proposals, with respect to such subject matters.



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Telephone: 503.297.3636

Toll Free: 800.977.3636

Customer Service:

info@puritylabsinc.com

Fax: 503.297.3738

Website: www.puritylabsinc.com

PURITYTM Laboratories

50 Years Experience in Environmental Laboratory Testing

ADVANCING THE STANDARDS

Purity Laboratories (Purity) is dedicated to advancing the standards of product testing in the hemp industry.

Our "Purity TestedTM" protocols for pesticide and toxic compounds testing revolutionized product testing in the nutraceutical industry. Purity offers the same comprehensive approach to testing hemp and hemp products, which proposes to set the "gold standard" of laboratory testing for the hemp industry.

WHY TEST YOUR HEMP AT PURITY?

Purity has more than 50 years' of experience in environmental lab testing and experience counts when testing hemp products on compliance with specific regulations that vary from state-to-state. The legalization of hemp production and distribution under the Agriculture Improvement Act of 2018 (2018 Farm Bill) gave rise to many new industries and newly formed laboratories. You'll want to trust your hemp testing to a laboratory that has long reputation for excellence in environmental testing.

Purity is an ISO/IEC 17025:2017 certified laboratory. It is also the first commercial "center of excellence" for Agilent Technologies, the leading manufacturer of laboratory equipment for the hemp industry.

Purity operates a 19,000 state-of-the-art laboratory equipped with LC-MS, GC-MS, ICP-MS and HPLC-MS that offers our testing by the most advanced detection and analysis equipment hemp and hemp products.



PURITYTM Laboratories

17387 63rd Ave.

Lake Oswego, OR 97035

Telephone: 800.977.3636/503.297.3636

Website: www.puritylabsinc.com

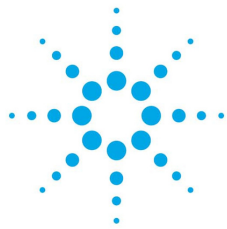
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ISO/IEC 17025:2017



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