

List of Contaminants for Hemp and Kratom

Hemp and Kratom samples that are found to contain contaminants in excess of the following levels shall be considered adulterated.

Pesticide Limits. The following list of contaminants does not constitute authorization to use or apply any of the following during hemp or kratom cultivation or processing.

Pesticide CAS No. Action Level for Inhalable/Smokable Products (µg/kg) Action Level for All Other Products (µg/kg)

Abamectin	71751-41-2	100	300
Acephate	30560-19-1	100	3,000
Acequinocyl	57960-19-7	100	2,000
Acetamiprid	135410-20-7	100	3,000
Aldicarb	116-06-3	100	100
Azoxystrobin	131860-33-8	100	3,000
Bifenazate	149877-41-8	100	3,000
Bifenthrin	82657-04-3	500	500
Boscalid	188425-85-6	100	3,000
Captan	133-06-2	700	3,000
Carbaryl	63-25-2	500	500
Carbofuran	1563-66-2	100	100
Chlorantraniliprole	500008-45-7	300	3,000
Chlordane	57-74-9	100	100
Chlorfenapyr	122453-73-0	100	100

Chlormequat Chloride 999-81-5 300 3,000
Chlorpyrifos 2921-88-2 100 100
Clofentezine 74115-24-5 100 500
Coumaphos 56-72-4 100 100
Cyfluthrin 68359-37-5 1,000 1,000
Cypermethrin 52315-07-8 1,000 1,000
Daminozide 1596-84-5 100 100
DDCP (Dichlorvos) 1596-84-5 100 100
Diazinon 333-41-5 100 200
Dimethoate 60-51-5 100 100
Dimethomorph 110488-70-5 1,000 3,000
Ethoprop(hos) 13194-48-4 100 100
Etofenprox 80844-07-1 100 100
Etoxazole 153233-91-1 100 1,500
Fenhexamid 126833-17-8 100 3,000
Fenoxycarb 72490-01-8 100 100
Fenpyroximate 111812-58-9 100 2,000
Fipronil 120068-37-3 100 100
Flonicamid 158062-67-0 100 2,000
Fludioxonil 131341-86-1 100 3,000
Hexythiazox 78587-05-0 100 2,000
Imazalil 35554-44-0 100 100

Imidacloprid 138261-41-3 300 3,000
Kresoxim-methyl 143390-89-0 100 1,000
Malathion 121-75-5 500 2,000
Metalaxyl 57837-19-1 300 3,000
Methiocarb 2032-65-7 100 100
Methomyl 16752-77-5 100 100
Methyl Parathion 298-00-0 100 100
Mevinphos 7786-34-7 100 100
Myclobutanil 88671-89-0 100 3,000
Naled 300-76-5 100 500
Oxamyl 23135-22-0 200 200
Paclobutrazol 76738-62-0 100 100
Pentachloronitrobenzene 82-68-8 100 200
Permethrin 52645-53-1 500 1,000
Phosmet 732-11-6 100 200
Piperonylbutoxide 51-03-6 300 3,000
Prallethrin 23031-36-9 100 400
Propiconazole 60207-90-1 100 1,000
Propoxur 114-26-1 100 100
Pyrethrins 8003-34-7 500 1,000
Pyridaben 96489-71-3 100 3,000
Spinetoram 187166-15-0, 187166-40-1 100 3,000

Spinosad 131929-60-7, 131929-3-0 100 3,000

Spiromesifen 283594-90-1 100 3,000

Spirotetramat 203313-25-1 100 3,000

Spiroxamine 118134-30-8 100 100

Tebuconazole 107534-96-3 100 1,000

Thiacloprid 111988-49-9 100 100

Thiamethoxam 153719-23-4 100 1,000

Trifloxystrobin 141517-21-7 100 3,000

Residual Solvent and Processing Chemical Limits

Solvent or Processing Chemical CAS No. Action Level ($\mu\text{g/g}$)

1,2-Dichloroethene 1,870

Acetone 67-64-1 5,000

Acetonitrile 75-05-8 410

Butane 106-97-8 2,000

Chloroform 67-66-3 60

Ethanol 64-17-5 5,000

Ethyl Acetate 141-78-6 5,000

Ethyl Ether 60-29-7 5,000

Heptane 142-82-5 5,000

Hexane 110-54-3 290

Isopropyl Alcohol 67-63-0 5,000

Methanol 67-56-1 3,000

Methylene Chloride 75-09-2 600

Pentane 109-66-0 5,000

Propane 74-98-6 5,000

Toluene 108-88-3 890

Trichloroethylene 79-01-6 80

Total Xylenes (ortho-, meta-,
para-) 1330-20-7 2,170

The limit for ethanol does not apply to products that are intended to be orally consumed products containing alcohol.

The limit for ethanol or isopropyl alcohol does not apply to products that are intended to be topical products.

Toxic Metals Limits

Metal Action Level for Inhalable/Smokable Products ($\mu\text{g/g}$) Action Level for All Other Products ($\mu\text{g/g}$)

Cadmium 0.2 0.5

Lead 0.2 0.5

Arsenic 0.2 1.5

Mercury 0.1 1

Microbiological Limits for ingestible and inhalable products

Shiga toxin-producing Escherichia coli (STEC E. coli) and other pathogenic E. coli, none present.

Listeria monocytogenes, none present.

Salmonella and Shigella, none present.

Clostridium botulinum and related neurotoxins, none present.

Staphylococcus aureus and related toxins, none present.

Coliforms greater than 10 colony forming units per gram.

Mycotoxin Limits.

Total Aflatoxin (B1, B2, G1, G2) - 20 µg/kg

Ochratoxin - 20 µg/kg

Dried flower products – The water activity shall not exceed 0.65 Aw.

Edible products – The water activity shall not exceed 0.85 Aw.

Foreign Material Limits for ingestible and inhalable products

Foreign Material Action Level

Mold >¼ of the total sample area covered

Insect Fragments/Eggs, Hair, Mammalian

Excreta 1 count per 3.0 grams

Sand, Soil, Dirt, & Other Extraneous Material >0.5% by weight

The Department shall have the ability to set acceptable maximum limits for products derived from hemp kratom, hemp, and hemp seed derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers