

**Montana Department of Revenue  
Cannabis Control Division  
Quality Assurance Testing Requirements Appendix (Appendix) Version 1.0**

**Table 1.0a – Testing Requirements for Usable Marijuana**

<b>Quality Assurance Compliance Test Panel</b>	<b>Usable Marijuana</b>
Potency	✓
Filth & Foreign Matter	✓
Percent Moisture	✓
Microbiologicals	✓
Mycotoxins	✓
Pesticides	✓
Solvents	--
Heavy Metals*	✓
✓ Required -- Not required * Random testing	

**Table 1.0b – Testing Requirements for Marijuana Concentrates and Extracts**

<b>Quality Assurance Compliance Test Panel</b>	<b>Marijuana Concentrates &amp; Extracts</b>	
	<b>Non-Solvent Based</b>	<b>Solvent Based</b>
Potency	✓	✓
Filth & Foreign Matter	--	--
Percent Moisture	--	--
Microbiologicals	✓	--
Mycotoxins	✓	✓
Pesticides	✓	✓
Solvents	--	✓
Heavy Metals*	✓	✓
✓ Required -- Not required * Random testing		

**Table 1.0c – Testing Requirements for Marijuana Infused Products**

Quality Assurance Compliance Test Panel	Marijuana Infused Products
	Direct + & Indirect +
Potency	✓
Filth & Foreign Matter	--
Percent Moisture	--
Microbiologicals	✓
Mycotoxins	--
Pesticides	--
Solvents	--
Heavy Metals*	--
✓ Required -- Not required * Random testing + Sourced from previously tested and compliant marijuana items	

**Table 1.0d – Testing Requirements for Marijuana Pre-rolls**

Quality Assurance Compliance Test Panel	Marijuana Pre-rolls
	Infused + & Non-Infused +
Potency	✓
Filth & Foreign Matter	--
Percent Moisture	--
Microbiologicals	--
Mycotoxins	--
Pesticides	--
Solvents	--
Heavy Metals*	--
✓ Required -- Not required * Random testing + Sourced from previously tested and compliant marijuana items	

**Table 2.0 – Residual Solvents Action Levels**

Residual Solvents	(CAS) Registry Number	Action Level ppm
Acetone	67-64-1	5,000
Benzene	71-43-2	2
Total Butanes <sup>1</sup>		5,000
Chloroform	67-66-3	60
Cyclohexane	110-82-7	3,880
Dichloromethane	75-09-2	600
Ethyl acetate	141-78-6	5,000
Heptane	142-82-5	5,000
Total Hexanes <sup>2</sup>		290
Isopropanol (2-propanol)	67-63-0	5,000
Methanol	67-56-1	3,000
Total Pentanes <sup>3</sup>		5,000
Propane	74-98-6	5,000
Toluene	108-88-3	890
Total Xylenes <sup>4</sup>		2,170

<sup>1</sup> Total butanes should be calculated as sum of n-butane and iso-butane (CAS numbers 106-97-8 and 75-8-5 respectively).

<sup>2</sup> Total hexanes should be calculated as sum of n-hexane, 2-methylpentane, 3-methylpentane, 2,2-dimethylbutane and 2,3-dimethylbutane (CAS numbers 110-54-3, 107-83-5, 96-14-0, 75-83-2, and 79-29-8 respectively).

<sup>3</sup> Total pentanes should be calculated as sum of n-pentane, iso-pentane, and neo-pentane (CAS numbers 109-66-0, 78-78-4, and 463-82-1 respectively).

<sup>4</sup> Total xylenes should be calculated as sum of 1,2-dimethylbenzene, 1,3-dimethylbenzene, and 1,4-dimethylbenzene (CAS numbers 95-47-6, 108-38-3, and 106-42-3 respectively).

**Table 3.0 – Heavy Metals Action Levels**

Heavy Metals	Action Level ppm; Inhalable Marijuana Items	Action Level ppm; Other Marijuana Items
Arsenic	0.2	1.5
Cadmium	0.2	0.5
Lead	0.5	0.5
Mercury	0.1	3.0

**Proposed – See MAR Notice 42-1071.**

**Table 4.0a - Pesticide Action Levels**

(Effective through one day less than six months from the date of adoption of MAR Notice No. 42-1071)

<b>Pesticides</b>	<b>(CAS) Registry Number</b>	<b>Action Level ppm; Dry Flower</b>	<b>Action Level ppm; Concentrates &amp; Extracts</b>
Abamectin	71751-41-2	0.5	2.5
Acequinocyl	57960-19-7	2.0	10
Bifenazate	149877-41-8	0.2	1.0
Bifenthrin	82657-04-3	0.2	1.0
Chlormequat Chloride	999-81-5	1.0	5.0
Cyfluthrin	68359-37-5	1.0	5.0
Daminozide	1596-84-5	1.0	5.0
Etoxazole	153233-91-1	0.2	1.0
Fenoxycarb	72490-01-8	0.2	1.0
Imazalil	35554-44-0	0.2	1.0
Imidacloprid	138261-41-3	0.4	2.0
Myclobutanil	88671-89-0	0.2	0.6
Paclobutrazol	76738-62-0	0.4	2.0
Pyrethrins <sup>1</sup>	8003-34-7	1.0	5.0
Spinosad	168316-95-8	0.2	1.0
Spirotetramat	203313-25-1	0.2	1.0
Trifloxystrobin	141517-21-7	0.2	1.0

<sup>1</sup> Pyrethrins should be measured as the cumulative residues of pyrethrin 1, cinerin 1, and jasmolin 1 (CAS numbers 121-21-1, 25402-06-6, and 4466-14-2 respectively).

**Table 4.0b – Pesticide Action Levels**

(Effective six months from the date of adoption of MAR Notice No. 42-1071)

<b>Pesticides</b>	<b>(CAS) Registry Number</b>	<b>Action Level; ppm</b>
Abamectin	71751-41-2	0.5
Acephate	30560-19-1	0.4
Acequinocyl	57960-19-7	2.0
Acetamiprid	135410-20-7	0.2
Aldicarb	116-06-3	0.4
Azoxystrobin	131860-33-8	0.2
Bifenazate	149877-41-8	0.2
Bifenthrin	82657-04-3	0.2
Boscalid	188425-85-6	0.4
Carbaryl	63-25-2	0.2
Carbofuran	1563-66-2	0.2
Chlorantraniliprole	500008-45-7	0.2
Chlorfenapyr	122453-73-0	1.0
Chlorpyrifos	2921-88-2	0.2
Clofentezine	74115-24-5	0.2
Cyfluthrin	68359-37-5	1.0
Cypermethrin	52315-07-8	1.0

**Proposed – See MAR Notice 42-1071.**

Daminozide	1596-84-5	1.0
DDVP (Dichlorvos)	62-73-7	1.0
Diazinon	333-41-5	0.2
Dimethoate	60-51-5	0.2
Ethoprophos	13194-48-4	0.2
Etofenprox	80844-07-1	0.4
Etoxazole	153233-91-1	0.2
Fenoxycarb	72490-01-8	0.2
Fenpyroximate	134098-61-6	0.4
Fipronil	120068-37-3	0.4
Flonicamid	158062-67-0	1.0
Fludioxonil	131341-86-1	0.4
Hexythiazox	78587-05-0	1.0
Imazalil	35554-44-0	0.2
Imidacloprid	138261-41-3	0.4
Kresoxim-methyl	143390-89-0	0.4
Malathion	121-75-5	0.2
Metalaxyl	57837-19-1	0.2
Methiocarb	2032-65-7	0.2
Methomyl	16752-77-5	0.4
Methyl parathion	298-00-0	0.2
MGK-264	113-48-4	0.2
Myclobutanil	88671-89-0	0.2
Naled	300-76-5	0.5
Oxamyl	23135-22-0	1.0
Paclobutrazol	76738-62-0	0.4
Permethrins <sup>1</sup>	52645-53-1	0.2
Phosmet	732-11-6	0.2
Piperonyl butoxide	51-03-6	2.0
Prallethrin	23031-36-9	0.2
Propiconazole	60207-90-1	0.4
Propoxur	114-26-1	0.2
Pyrethrins <sup>2</sup>	8003-34-7	1.0
Pyridaben	96489-71-3	0.2
Spinosad	168316-95-8	0.2
Spiromesifen	283594-90-1	0.2
Spirotetramat	203313-25-1	0.2
Spiroxamine	118134-30-8	0.4
Tebuconazole	80443-41-0	0.4
Thiacloprid	111988-49-9	0.2
Thiamethoxam	153719-23-4	0.2
Trifloxystrobin	141517-21-7	0.2

<sup>1</sup> Permethrins should be measured as cumulative residue of cis- and trans-permethrin isomers (CAS numbers 54774-45-7 and 51877-74-8 respectively).

<sup>2</sup> Pyrethrins should be measured as the cumulative residues of pyrethrin 1, cinerin 1, and jasmolin 1 (CAS numbers 121-21-1, 25402-06-6, and 4466-14-2 respectively).