

State of California
Department of Cannabis Control
California Code of Regulations, Title 4, Division 19
Proposed Modified Regulation Text:
Pesticide Testing

LEGEND:

45-day text proposed for adoption is shown in underline

45-day text proposed for deletion is shown in ~~strikethrough~~

21-day modified text additions are shown in double underline

21-day modified text deletions are shown in ~~double strikethrough~~

15-day modified text additions are shown in blue italicized underline

15-day modified text deletions are shown in ~~red italicized strikethrough~~

§15719. Residual Pesticides Testing.

(a) The licensed laboratory ~~must~~shall analyze at minimum 0.5 grams of the representative sample of cannabis and cannabis products to determine whether residual pesticides are present.

(b) The licensed laboratory ~~must~~shall report ~~whether any Category I Residual Pesticides are detected above the limit of detection (LOD) and shall report the result of the Category II Residual Pesticides~~ residual pesticide testing in unit micrograms per gram (µg/g) on the COA. The laboratory ~~must~~shall indicate “pass” or “fail” on the COA.

(c) Until [effective date + 18 months]:

(1) For each pesticide listed in ~~the table~~ Table 1 below, ~~the~~ The licensed laboratory ~~must~~shall establish a limit of quantitation (LOQ) of 0.10 µg/g or lower for all ~~Category I Residual Pesticides~~ at or below 0.10 µg/g ~~no greater than 50% of the indicated action level for that pesticide.~~

(d)(2) A ~~representative~~ sample passes residual pesticide testing if pesticide residues found in the sample do not exceed the indicated action levels in ~~the table~~ Table 1 below. The sample shall be deemed to have passed the residual pesticides testing if both of the following conditions are met:

(d) Beginning [effective date + 18 months]:

(1) For each pesticide listed in Table 2 below, the licensed laboratory must establish an

LOQ as follows:

(A) At or below 0.10 µg/g if the action level is ≥0.10 µg/g.

(B) At or below the indicated action level if the action level is <0.10 µg/g.

(2) A sample passes residual pesticide testing if pesticide residues found in the sample do not exceed the indicated action levels in Table 2 below.

~~(1) The presence of any residual pesticide listed in the following tables in Category I are not detected, and~~

~~(2) The presence of any residual pesticide listed in the following tables in Category II does not exceed the indicated action levels.~~

(e) If a representative sample fails residual pesticide testing, then the batch from which the sample was collected fails residual pesticide testing and may not be released for retail sale.

Table 1

Category I Residual Pesticide	CAS No.
Aldicarb	116-06-3
Carbofuran	1563-66-2
Chlordane	57-74-9
Chlorfenapyr	122453-73-0
Chlorpyrifos	2921-88-2
Coumaphos	56-72-4
Daminozide	1596-84-5
DDVP (Dichlorvos)	62-73-7
Dimethoate	60-51-5
Ethoprop(hos)	13194-48-4
Etofenprox	80844-07-1
Fenoxycarb	72490-01-8
Fipronil	120068-37-3
Imazalil	35554-44-0
Methiocarb	2032-65-7
Methyl parathion	298-00-0
Mevinphos	7786-34-7
Paclobutrazol	76738-62-0

Propoxur	114-26-1
Spiroxamine	118134-30-8
Thiacloprid	11988-49-9

Category II Residual Pesticide	CAS No.	Action Level (µg/g) for Inhalable Cannabis and Cannabis Products	Action Level (µg/g) for Non- Inhalable Cannabis Products
Abamectin	71751-41-2 <u>65195-55-3</u>	0.10	0.3-0.10 <u>0.3</u>
Acephate	30560-19-1	0.10	5.0-14.0 <u>5.0</u>
Acequinocyl	57960-19-7	0.10	4.3-7.4 <u>4.0</u>
Acetamiprid	135410-20-7	0.1-3.0 <u>0.10</u> <u>3.0</u>	5.0-6.5 <u>6.5</u>
<u>Aldicarb</u>	<u>116-06-3</u>	0.50 <u>0.10</u>	0.014 <u>0.10</u>
Azoxystrobin	131860-33-8	0.1-16.0 <u>0.10</u> <u>16.0</u>	40-30.0 <u>40.0</u>
Bifenazate	149877-41-8	0.10	5.0-6.5 <u>6.5</u>
Bifenthrin	82657-04-3	3.0	0.5-1.6 <u>0.50-2.0</u>
Boscalid	188425-85-6	0.10	10-11 <u>10.0-14.0</u>
Buprofezin	69327-76-0	0.10	60
Captan + 1,2,3,6- <i>Tetrahydrophthalimide (THPI)</i>	133-06-2 + 85-40- 5	0.70	5.0 <u>6.5</u>
Carbaryl	63-25-2	0.50	0.50
Carbendazim	10605-21-7	2.0	5.0
<u>Carbofuran</u>	<u>1563-66-2</u>	0.50 <u>0.10</u>	0.0050 <u>0.10</u>
Chlorantraniliprole	500008-45-7	10-14.0 <u>10.0</u> <u>14.0</u>	40.0
<u>Chlordane</u>	<u>5103-71-9 (cis),</u> <u>5103-74-2 (trans)</u>	0.10	0.050 <u>0.10</u>
<u>Chlorfenapyr</u>	<u>122453-73-0</u>	0.10	2.5 <u>0.10</u>
<u>Chlorpyrifos</u>	<u>2921-88-2</u>	0.50 <u>0.10</u>	0.0050 <u>0.10</u>

Clofentezine	74115-24-5	0.10	0.5 0.65 0.50 <u>0.85</u>
<u>Coumaphos</u>	<u>56-72-4</u>	<u>0.10</u>	0.010 <u>0.10</u>
Cyfluthrin	68359-37-5	2.0	10.59 <u>1.0</u>
Cypermethrin	52315-07-8	1.0	10.70 <u>1.0</u>
Cyprodinil	121552-61-2	0.10	50.0
Dacthal (DPCA)	1861-32-1	0.10	0.050
<u>Daminozide</u>	<u>1596-84-5</u>	<u>0.10</u>	<u>0.10</u>
<u>DDVP (Dichlorvos)</u>	<u>62-73-7</u>	<u>0.10</u>	0.042 <u>0.10</u>
Diazinon	333-41-5	0.10	0.20 15 <u>0.20</u>
<u>Dimethoate</u>	<u>60-51-5</u>	<u>0.10</u>	2.0 <u>0.10</u>
Dimethomorph	110488-70-5	2.0	2013.0 <u>20.0</u>
<u>Ethoprop(hos)</u>	<u>13194-48-4</u>	<u>0.10</u>	0.020 <u>0.10</u>
<u>Etofenprox</u>	<u>80844-07-1</u>	<u>0.10</u>	<u>5.0</u>
Etoxazole	153233-91-1	0.10	<u>1.50</u>
Fenhexamid	126833-17-8	0.10	1019.0 10.0 <u>25.0</u>
<u>Fenoxycarb</u>	<u>72490-01-8</u>	<u>0.10</u>	3.0 <u>0.10</u>
Fenpyroximate	111812-58-9	0.10	24.0 2.0 <u>4.0</u>
Fenobucarb (BPMC)	3766-81-2	0.010	0.010
<u>Fipronil</u>	<u>120068-37-3</u>	<u>0.10</u>	0.030 <u>0.10</u>
Flonicamid	158062-67-0	0.10	26.0 2.0 <u>7.9</u>
Fludioxonil	131341-86-1	0.10	3025 <u>30.0</u>
Fluopyram	658066-35-4	5.0	25.0
Hexythiazox	78587-05-0	0.10	26.0 2.0 <u>6.0</u>
<u>Imazalil</u>	<u>35554-44-0</u>	<u>0.10</u>	5.0 <u>0.10</u>
Imidacloprid	138261-41-3	5.0	3.0 <u>3.9</u>
Isoprocarb (MIPC)	2631-40-5	0.010	0.010
Kresoxim-methyl	143390-89-0	0.10	<u>1.0</u>
Malathion	121-75-5	0.50	58.0 5.0 <u>8.0</u>
Metalaxyl	57837-19-1	2.0	<u>15.0</u>
Methamidophos	10265-92-6	1.0	0.049

<u>Methiocarb</u>	<u>2032-65-7</u>	<u>0.200.10</u>	<u>0.0150.10</u>
Methomyl	16752-77-5	1.0	0.10 0.075 0.10
<u>Methyl parathion</u>	<u>298-00-0</u>	<u>0.10</u>	<u>0.0013 0.10</u>
<u>Mevinphos</u>	<u>7786-34-7</u>	<u>0.040 0.10</u>	<u>0.017 0.10</u>
<u>Monocrotophos</u>	<u>6923-22-4</u>	<u>0.30</u>	<u>0.0030</u>
Myclobutanil	88671-89-0	0.10	9.0
Naled	300-76-5	0.10	0.50 16 0.50
<u>Omethoate</u>	<u>1113-02-6</u>	<u>0.10</u>	<u>1.8</u>
Oxamyl	23135-22-0	0.50	0.20 13 0.20
Paclobutrazol	<u>76738-62-0</u>	<u>0.10</u>	<u>5.0 0.10</u>
Pentachloronitrobenzene	82-68-8	0.10	0.21 0.20 1.0
Permethrin	52645-53-1	0.50	20.0
Phosmet	732-11-6	0.10	0.20 0.70 0.20
Piperonyl butoxide	51-03-6	3.0	8.0
Prallethrin	23031-36-9	0.10	0.41.0
<u>Procymidone</u>	<u>32809-16-8</u>	<u>0.005</u>	<u>0.005</u>
Propiconazole	60207-90-1	0.10	20.0
Propoxur	<u>114-26-1</u>	<u>0.10</u>	<u>0.019 0.10</u>
<u>Pymetrozine</u>	<u>123312-89-0</u>	<u>1.0</u>	<u>0.40</u>
<u>Pyraclastrobin</u>	<u>175013-18-0</u>	<u>0.10</u>	<u>2.5</u>
Pyrethrins	8003-34-7	0.50	1.0
Pyridaben	96489-71-3	0.10	3.0
<u>Pyrimethanil</u>	<u>53112-28-0</u>	<u>0.10</u>	<u>15.0</u>
Spinetoram	<u>187166-15-0,</u> <u>187166-40-1</u> <u>035545-74-7</u> <u>187166-15-0,</u> <u>187166-40-1</u>	0.10	32.5 3.0 3.2
Spinosad	<u>131929-60-7,</u> <u>131929-63-0</u> <u>168316-95-8</u> <u>131929-63-0</u>	0.10	32.5 3.0 3.2

Spiromesifen	283594-90-1	0.10	121.9 <u>12.0</u>
Spirotetramat	203313-25-1	0.10	13.0
<u>Spiroxamine</u>	<u>118134-30-8</u>	<u>0.10</u>	0.70 <u>0.10</u>
Tebuconazole	107534-96-3	0.118 <u>0.10</u> <u>18.0</u>	21.5 <u>2.0</u>
Thiacloprid	<u>111988-49-9</u>	<u>0.10</u>	1.0 <u>0.10</u>
Thiamethoxam	153719-23-4	5.0	4.5
Trifloxystrobin	141517-21-7	0.10	30.0

Table 2

<u>Pesticide</u>	<u>CAS No.</u>	<u>Action Level (µg/g) for Inhalable Cannabis and Cannabis Products</u>	<u>Action Level (µg/g) for Non-Inhalable Cannabis Products</u>
<u>Abamectin</u>	<u>65195-55-3</u>	<u>0.10</u>	<u>0.10</u>
<u>Acephate</u>	<u>30560-19-1</u>	<u>0.10</u>	<u>0.18</u>
<u>Acequinocyl</u>	<u>57960-19-7</u>	<u>0.10</u>	<u>4.0</u>
<u>Acetamiprid</u>	<u>135410-20-7</u>	0.10 <u>3.0</u>	5.0 <u>6.5</u>
<u>Aldicarb</u>	<u>116-06-3</u>	<u>0.10</u>	<u>0.02</u>
<u>Azoxystrobin</u>	<u>131860-33-8</u>	0.10 <u>16.0</u>	<u>30.0</u>
<u>Bifenazate</u>	<u>149877-41-8</u>	<u>0.10</u>	5.0 <u>6.5</u>
<u>Bifenthrin</u>	<u>82657-04-3</u>	<u>3.0</u>	0.50 <u>2.0</u>
<u>Boscalid</u>	<u>188425-85-6</u>	<u>0.10</u>	10.0 <u>14.0</u>
<u>Buprofezin</u>	<u>69327-76-0</u>	<u>0.10</u>	<u>60.0</u>
<u>Captan + 1, 2,3,6-Tetrahydrophthalimide (THPI)</u>	<u>133-06-2 + 85-40-5</u>	<u>0.70</u>	5.0 <u>6.5</u>
<u>Carbaryl</u>	<u>63-25-2</u>	<u>0.50</u>	<u>0.50</u>
<u>Carbendazim</u>	<u>10605-21-7</u>	<u>2.0</u>	<u>6.5</u>
<u>Carbofuran</u>	<u>1563-66-2</u>	<u>0.10</u>	<u>0.02</u>
<u>Chlorantraniliprole</u>	<u>500008-45-7</u>	10.0 <u>14.0</u>	<u>40.0</u>
<u>Chlordane</u>	<u>5103-71-9 (cis) + 5103-74-2 (trans)</u>	<u>0.10</u>	<u>0.065</u>

<u>Chlorfenapyr</u>	<u>122453-73-0</u>	<u>0.10</u>	<u>0.10</u>
<u>Chlorpyrifos</u>	<u>2921-88-2</u>	<u>0.10</u>	<u>0.093</u>
<u>Clofentezine</u>	<u>74115-24-5</u>	<u>0.10</u>	0.50 <u>0.85</u>
<u>Coumaphos</u>	<u>56-72-4</u>	<u>0.10</u>	<u>0.10</u>
<u>Cyfluthrin</u>	<u>68359-37-5</u>	<u>2.0</u>	<u>0.77</u>
<u>Cypermethrin</u>	<u>52315-07-8</u>	<u>1.0</u>	<u>0.92</u>
<u>Cyprodinil</u>	<u>121552-61-2</u>	<u>0.10</u>	<u>50.0</u>
<u>Dacthal (DPCA)</u>	<u>1861-32-1</u>	<u>0.10</u>	<u>0.07</u>
<u>Daminozide</u>	<u>1596-84-5</u>	<u>0.10</u>	<u>0.10</u>
<u>DDVP (Dichlorvos)</u>	<u>62-73-7</u>	<u>0.10</u>	<u>0.05</u>
<u>Diazinon</u>	<u>333-41-5</u>	<u>0.10</u>	<u>0.20</u>
<u>Dimethoate</u>	<u>60-51-5</u>	<u>0.10</u>	<u>0.10</u>
<u>Dimethomorph</u>	<u>110488-70-5</u>	<u>2.0</u>	<u>16.0</u>
<u>Ethoprop(hos)</u>	<u>13194-48-4</u>	<u>0.10</u>	<u>0.02</u>
<u>Etofenprox</u>	<u>80844-07-1</u>	<u>0.10</u>	<u>5.0</u>
<u>Etoxazole</u>	<u>153233-91-1</u>	<u>0.10</u>	<u>1.5</u>
<u>Fenhexamid</u>	<u>126833-17-8</u>	<u>0.10</u>	10.0 <u>25.0</u>
<u>Fenoxycarb</u>	<u>72490-01-8</u>	<u>0.10</u>	<u>0.05</u>
<u>Fenpyroximate</u>	<u>111812-58-9</u>	<u>0.10</u>	2.0 <u>4.0</u>
<u>Fenobucarb (BPMC)</u>	<u>3766-81-2</u>	<u>0.02</u>	<u>0.02</u>
<u>Fipronil</u>	<u>120068-37-3</u>	<u>0.10</u>	<u>0.03</u>
<u>Flonicamid</u>	<u>158062-67-0</u>	<u>0.10</u>	2.0 <u>7.9</u>
<u>Fludioxonil</u>	<u>131341-86-1</u>	<u>0.10</u>	<u>30.0</u>
<u>Fluopyram</u>	<u>658066-35-4</u>	<u>5.00</u>	<u>33.0</u>
<u>Hexythiazox</u>	<u>78587-05-0</u>	<u>0.10</u>	2.0 <u>6.0</u>
<u>Imazalil</u>	<u>35554-44-0</u>	<u>0.10</u>	<u>0.10</u>
<u>Imidacloprid</u>	<u>138261-41-3</u>	<u>5.0</u>	3.0 <u>3.9</u>
<u>Isoprocarb (MIPC)</u>	<u>2631-40-5</u>	<u>0.02</u>	<u>0.02</u>
<u>Kresoxim-methyl</u>	<u>143390-89-0</u>	<u>0.10</u>	<u>1.0</u>
<u>Malathion</u>	<u>121-75-5</u>	<u>0.50</u>	5.0 <u>8.0</u>

<u>Metalaxyl</u>	<u>57837-19-1</u>	<u>2.0</u>	<u>15.0</u>
<u>Methamidophos</u>	<u>10265-92-6</u>	<u>1.0</u>	<u>0.064</u>
<u>Methiocarb</u>	<u>2032-65-7</u>	<u>0.10</u>	<u>0.02</u>
<u>Methomyl</u>	<u>16752-77-5</u>	<u>1.0</u>	<u>0.10</u>
<u>Methyl parathion</u>	<u>298-00-0</u>	<u>0.10</u>	<u>0.023</u>
<u>Mevinphos</u>	<u>7786-34-7</u>	<u>0.04</u>	<u>0.022</u>
<u>Monocrotophos</u>	<u>6923-22-4</u>	<u>0.30</u>	<u>0.056</u>
<u>Myclobutanil</u>	<u>88671-89-0</u>	<u>0.10</u>	<u>9.0</u>
<u>Naled</u>	<u>300-76-5</u>	<u>0.10</u>	<u>0.21</u>
<u>Omethoate</u>	<u>1113-02-6</u>	<u>0.10</u>	<u>2.0</u>
<u>Oxamyl</u>	<u>23135-22-0</u>	<u>0.50</u>	<u>0.17</u>
<u>Paclobutrazol</u>	<u>76738-62-0</u>	<u>0.10</u>	<u>0.10</u>
<u>Pentachloronitrobenzene</u>	<u>82-68-8</u>	<u>0.10</u>	0.20 <u>1.0</u>
<u>Permethrin</u>	<u>52645-53-1</u>	<u>0.50</u>	<u>20.0</u>
<u>Phosmet</u>	<u>732-11-6</u>	<u>0.10</u>	<u>0.092</u>
<u>Piperonyl butoxide</u>	<u>51-03-6</u>	<u>3.0</u>	<u>8.0</u>
<u>Prallethrin</u>	<u>23031-36-9</u>	<u>0.10</u>	<u>1.0</u>
<u>Procymidone</u>	<u>32809-16-8</u>	<u>0.02</u>	<u>0.02</u>
<u>Propiconazole</u>	<u>60207-90-1</u>	<u>0.10</u>	<u>20.0</u>
<u>Propoxur</u>	<u>114-26-1</u>	<u>0.10</u>	<u>0.025</u>
<u>Pymetrozine</u>	<u>123312-89-0</u>	<u>1.0</u>	<u>0.52</u>
<u>Pyraclostrobin</u>	<u>175013-18-0</u>	<u>0.10</u>	<u>3.3</u>
<u>Pyrethrins</u>	<u>8003-34-7</u>	<u>0.50</u>	<u>1.0</u>
<u>Pyridaben</u>	<u>96489-71-3</u>	<u>0.10</u>	<u>3.0</u>
<u>Pyrimethanil</u>	<u>53112-28-0</u>	<u>0.10</u>	<u>15.0</u>
<u>Spinetoram</u>	<u>187166-15-0</u> <u>187166-40-1</u>	<u>0.10</u>	3.0 <u>3.2</u>
<u>Spinosad</u>	<u>131929-60-7</u> <u>131929-63-0</u>	<u>0.10</u>	3.0 <u>3.2</u>
<u>Spiromesifen</u>	<u>283594-90-1</u>	<u>0.10</u>	<u>2.5</u>
<u>Spirotetramat</u>	<u>203313-25-1</u>	<u>0.10</u>	<u>13.0</u>
<u>Spiroxamine</u>	<u>118134-30-8</u>	<u>0.10</u>	<u>0.10</u>

<u>Tebuconazole</u>	<u>107534-96-3</u>	0.10 <u>18.0</u>	<u>2.0</u>
<u>Thiacloprid</u>	<u>111988-49-9</u>	<u>0.10</u>	<u>0.10</u>
<u>Thiamethoxam</u>	<u>153719-23-4</u>	<u>5.0</u>	<u>4.5</u>
<u>Trifloxystrobin</u>	<u>141517-21-7</u>	<u>0.10</u>	<u>30.0</u>

~~(e) If the sample fails residual pesticides testing, the batch from which the sample was collected fails residual pesticides testing and shall not be released for retail sale.~~

NOTE: Authority cited: Section 26013, Business and Professions Code.

Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

§15731. Limits of Detection (LOD) and Limits of Quantitation (LOQ) for Quantitative Analyses.

~~(a) The licensed laboratory shall must calculate the LOD for chemical method analyses according to any of the following methods: using the standard~~

~~(1) Signal-to-noise ratio of between 3:1 and 2:1;~~

~~(2) Standard deviation of the response and the slope of calibration curve using a minimum of 7 spiked blank samples calculated as follows; $LOD = (3.3 \times \text{standard deviation of the response}) / \text{slope of the calibration curve}$; or~~

~~(3) A method published by the United States Food and Drug Administration (USFDA) or the United States Environmental Protection Agency (USEPA).~~

(b) For chromatographic analyses, the LOD must have a minimum signal-to-noise ratio of 3:1, which must be verified by visual inspection. For non-chromatographic analyses, the LOD must have a minimum signal-to-noise ratio of 3:1, which must be verified by software analysis or mathematical calculation.

~~(c) The licensed laboratory shall must calculate the LOQ for chemical method analyses according to any of the following methods: using the standard~~

~~(1) Signal-to-noise ratio of 10:1, at minimum;~~

~~(2) Standard deviation of the response and the slope using a minimum of 7 spiked blank samples calculated as follows:~~

~~$LOQ = (10 \times \text{standard deviation of the response}) / \text{slope of the calibration curve}$; or~~

~~(3) A method published by the USFDA or the USEPA.~~

(d) For chromatographic analyses, the LOQ must have a minimum signal-to-noise ratio of 10:1, which must be verified by visual inspection. For non-chromatographic analyses, the LOQ must have a minimum signal-to-noise ratio of 10:1, which must be verified by software analysis or mathematical calculation.

NOTE: Authority cited: Section 26013, Business and Professions Code. Reference: Sections 26100, 26104 and 26110, Business and Professions Code.