

So What are We Working With??

- Laboratory Standards:

- Must be ISO 17025 accredited or in process
- Strict educational/experience requirements for all employees
- Strict requirements for calibrations, QC checks, etc...
- Lab employees will be doing all sampling for products submitted for state compliance testing from the distributor

What is a “Batch?”

- Packaged or Unpackaged Harvest Batch (Cannabis Flower)
 - No more than 50lbs in a batch
 - A “batch” must be same strain, grown under same conditions, harvested at same time
 - Sample size is .35% of batch by wt
 - Both a primary sample and a retention (or “field duplicate”) sample must be taken
 - ex. From a 50 lb batch, sample size is ~79 grams PLUS a field duplicate of same size (160 grams!)

Pounds in Batch	Number of Increments
<= 10	8
10.1-20.0	16
20.1-30.0	23
30.1-40.0	29
40.1-50.0	34

What is a “Batch?”

- Packaged Cannabis Goods
- Cannot be above 150,000 units

Cannabis product batch size (units)	Number of Increments
<=50	2
51-150	3
151-500	5
501-1,200	8
1,201-3,200	13
3,201-10,000	20
10,001-35,000	32
35,001-150,000	50

What Will My Cannabis be Tested For?

Potency (Beginning January 2018)

- THCA, THC, CBDA, CBD, CBN, CBG
- Reported as % dry weight for flowers
- must be within +/- 10% of label claim
- Products may be re-labelled if they fail potency testing

Moisture Content (Beginning January 2018)

- Must be below 13% for flowers

Residual Solvents (Class II begins January 2018, Class I begins July 2018)

- Not required on kief, hash, or flower
- 22 solvents required, different limits for inhaled cannabis products and all other cannabis products (solvents will be phased in...see later slide)

Microbiological Testing

- **Required Analytes (Beginning January 2018)**
 - *E. coli* (shiga toxin producing) - not detected
 - *Salmonella* - not detected
 - *Aspergillus fumigatus, flavus, niger* and *terreus* - not detected
- **Aflatoxins B1, B2, G1, G2 <20 ug/kg (Beginning December 2018)**
- **Ochratoxin A < 20 ug/kg (Beginning December 2018)**

Edible Testing

- **But First, Homogeneity Testing (Beginning January 2018)**
 - 10 samples selected from a batch must all be within +/- 10% variation from each other
 - homogeneity testing required once every 6 months for each product type
 - only after homogeneity testing is passed can products be tested for contaminants

What Will My Cannabis be Tested For?

Water activity (Beginning December 2018)

- Cannabis must be below .65Aw (unlikely to fail unless your flowers are totally fresh)
- Edibles must be below .85Aw

Terpenes (Beginning December 2018)

- Only required if the manufacturer claims they are there
- A Batch will FAIL if the terpene content doesn't match label claim

What Will My Cannabis be Tested For?

Filth and Foreign Materials (Beginning December 2018)

A batch will fail IF:

- Mold is visibly present on $\frac{1}{4}$ of sample
- 1 insect fragment, 1 rodent hair, or 1 count mammalian excreta per 3.0 grams
- $\frac{1}{4}$ total sample area covered by sand, soil, cinders or dirt

Heavy Metals (Beginning December 2018)

- Arsenic, Cadmium, Lead, Mercury
- 3 different limits categories
 - edibles/suppositories/sublinguals, Inhaled goods, topical / transdermal goods

Residual Solvents

Class II - Testing for these begins January 1, 2018:

- 1,2 Dichloroethane, Benzene, Chloroform, Ethylene Oxide, Methylene Chloride, Trichloroethylene

Class I - Testing for these begins July 1, 2018:

- Acetone, Acetonitrile, Butane, Ethanol, Ethyl Acetate, Ethyl Ether, Heptane, Hexane, Isopropyl alcohol, Methanol, Pentane, Propane, Toluene, Total Xylenes

Pesticides

Class I - Testing for these begins January 1, 2018:

- Aldicarb, Carbofuran, Chlordane, Chlorfenapyr, Chlorpyrifos, Coumaphos, Daminozide, Dichlorvos, Dimethoate, Ethoprop(hos), Etofenprox, Fenoxycarb, Fipronil, Imazalil, Methiocarb, Methyl Parathion, Mevinphos, Paclobutrazol, Propoxur, Spiroxamine, Thiacloprid
- there is NO acceptable limit for these, they must be not-detected

Pesticides

- Different limits for inhalable and non-inhalable products

Class II - Testing for these begins July 1, 2018:

- Abamectin, Acephate, Acequinocyl, Acetamiprid, Azoxystrobin, Bifenazate, Bifenthrin, Boscalid, Captan, Carbaryl, Chorrantraniliprole, Clofentezine, Cyfluthrin, Cypermethrin, Diazinon, Dimethomorph, Etoxazole, Fenhexamid, Fenpyroximate, Flonicamid, Fludioxonil, Hexythiazox, Imidacloprid, Kresoxim-methyl, Malathion, Metalaxyl, Methomyl, Myclobutanil, Naled, Oxamyl, Pentachloronitrobenzene, Permethrin, Phosmet, Piperonylbutoxide, Prallethrin, Propiconazole, Pyrethrins, Pyridaben, Spinetoram, Spinosad, Spiromesifin, Spirotetramat, Tebuconazole, Thiamethoxam, Trifloxystrobin
- The acceptable limits range from 100ppb per compound (.1ppm) to 40 ppm

Remediation and Retesting

- Retesting not allowed without remediation
- Remediation allowed up to two times if a batch fails contaminant testing
- For edibles:
 - if a batch fails potency testing (outside of +/- 10% of stated potency on label, the batch can be re-labeled by the distributor)

Testing Phase-In

All Cannabis Harvested, or products manufactured **on or after 1/1/18** are required to be tested for:

- Cannabinoids, moisture content, Category II Residual solvents, Category I pesticides, Microbiological Impurities, Homogeneity (for edibles)

All Cannabis Harvested, or products manufactured **on or after 7/1/18** are required to be tested for:

- Category I Residual solvents, Category II pesticides, Foreign Material

All Cannabis Harvested, or products manufactured **on or after 12/31/18** are required to be tested for:

- Terpenoids, Mycotoxins, Heavy Metals, Water Activity, any additional tests requested by licensee