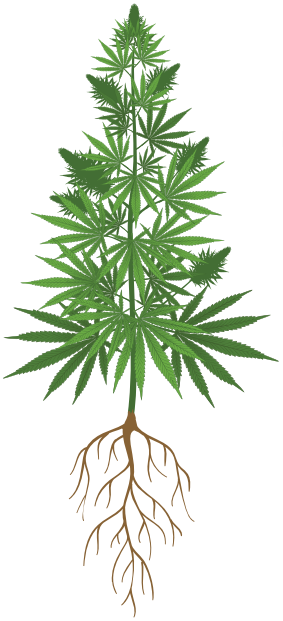
CHEMTEK

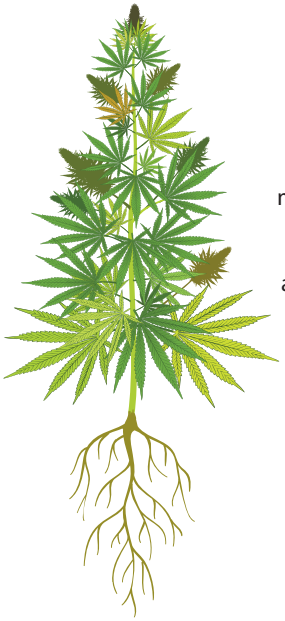
Live Biomass Filtration SOP

Introduction

Live material that has been properly frozen and stored will not contain many contaminates or byproducts that could affect the color of the extract. The more desirable terpenes will be most prevalent at this point and the cannabinoids will be mostly present in THCA form rather than Δ-9-THC. Therefore avoiding acidic or carbon based sorbents is key to successfully filtering and collecting all of the terpenes and THCA. Carbons are commonly used to deodorize oil and will swell very easily which allows it to be more selective towards aromatic compounds like terpenes. Acidic clays can absorb the terpenes as well due to their modified surface or affect them by isomerizing the terpenes into others. Most pigments in live material come from over matured plants where the thca has been broken down into Δ-9-THC or CBN. Δ-9-THC is a thick oil which can make it difficult for the clays to interact with the pigments. In this case, the use of a silica will aid in removing the pigments. Silica holds onto Δ-9-THC longer than the other compounds as they pass through which creates a window where the pigments are exposed and can be easily removed by the clays.



Biomass has not reached over maturity. It has been freshly harvested and/or frozen.



Biomass has reached over maturity. It has been freshly harvested and/or frozen.

The following personal protection equipment should be worn by all lab personnel during extraction and preparation:

1. Safety Goggles
2. Lab Coat
3. Gloves
4. Breathing Mask

Materials needed:

1. 1um Filter spool (.22um recommended)
2. Paper filters
3. Silica 60
4. W2
5. Alumina150
6. Weight Scale
7. Cup

WARNING: Failure to follow safety precautions of all equipment can result in hazardous conditions. Material data safety sheets should be available in the laboratory on all chemicals used in this process.

1. Pick the adequate spool size needed to have proper height and diameter for optimal flow and results. (Check the recommended use for each adsorbent to calculate the required spool size.)

2. Place paper filter directly above the sintered disc to facilitate cleaning after use.

3. Measure the recommended amount of Alumina 150 required and pour directly above the paper filter. Alumina 150 will remove excess water that could have been potentially picked up from the other sorbents during the filtration process to slow down the oxidation process of the oil.

4. Measure the recommended amount of W2 required and pour directly above the Alumina 150 layer. W2 is a heat activated natural clay for removing impurities without having negative side effects on the terpenes.

5. Optional: If pesticides are suspected, measure the recommended amount of W4 required and pour directly above the W2 layer.

6. Optional: If material has reached over maturity before harvest, measure the recommended amount of Silica 60 required and pour directly above all the other layers.

7. Ensure all clamps on the filtration unit are properly torqued before use. Priming the filtration unit with solvent is required if using a spool size wider than 6".
50 - 60psi is the recommended operating pressure.
60 - 75f is the recommended operating temperature.