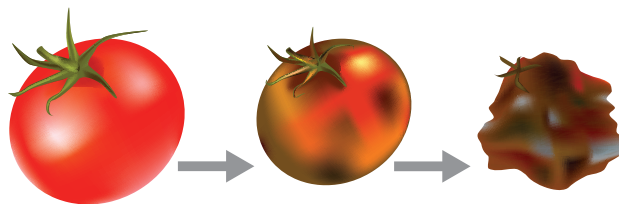


CHEMTEK

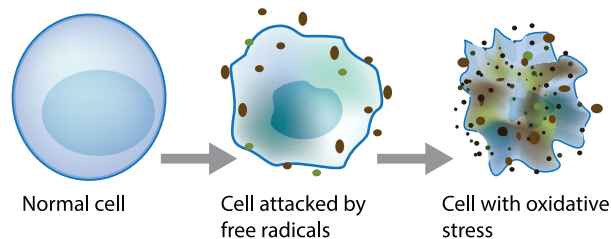
Old Biomass Filtration SOP

Introduction

Old material will have developed heavy pigmentation due to oxidation from age and storage conditions. Flavonoids, terpenoids, and other cannabinoids will have degraded at this point varying on a couple factors such as heat, oxygen, and UV light exposure. These factors will speed up the oxidation rate and produce more pigmentation as the compounds degrade into others. Most of the acidic cannabinoids will have decarboxylated into a sap form for example THCA into Δ -9-THC, which will present more challenges when working with colder temperatures. In this case, the use of acidic and high moisture sorbents will aid in removing the pigments that are homogenized with the phospholipids. In material that has been stored in heat, the terpenoids may have gone rancid giving the extract a sour like aroma. In this case the use of carbons will aid in removing rancid terpenoids.



OXIDATIVE STRESS



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. D-Wax silica
4. W3
5. ChloroSorb
6. Alumina150
7. Weight Scale
8. 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 W3 required and pour directly above the Alumina 150 layer. W3 is an acid activated clay with high moisture to aid in decolorizing and clarifying the oil.
 5. Optional: If the biomass has an undesirable aroma due to improper storage conditions, measure the recommended amount of ChloroSorb and pour directly above the W3 layer. ChloroSorb is a bentonite/-carbon blend for deodorizing and removing the rancid aromas.
 6. Optional: If pesticides are suspected, measure the recommended amount of W4 required and pour directly above the ChloroSorb, or W3 layer if no ChloroSorb was used.
 7. Measure the recommended amount of D-Wax required and pour directly above as the final top layer.
 8. 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.

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