

# Salvia Divinorum Chilled Acetone Extraction and Refinement Brief

Copyright December 28, 2006

Isolation of salvinorin from Salvia divinorum leaf extract can be accomplished through the use of column chromatography techniques which requires laboratory equipment. However, in November of 2000 an amateur experimenter worked up a simple extraction and refinement process for dried Salvia divinorum leaf which with practice and careful work can produce over 98% pure crystalline salvinorin. The method uses chilled acetone which can efficiently extract the active principal from Salvia divinorum leaf at a temperature as low as -20 degrees F. which significantly reduces the amount of waxy lipids extracted from the leaf while remaining soluble enough to salvinorin to quickly dissolve the majority of the salvinorin coating the leaf into the solvent. The solubility of salvinorin to minus twenty degree F. acetone is close to 5 milligrams per milliliter of solvent which is greater than the solubility of room temperature high proof ethanol.

Chilled acetone will efficiently remove most of the salvinorin from the leaf whether whole, crushed or powdered leaf if continuously stirred into the cold solvent for at least three minutes and re-extracting the leaf with more chilled acetone two more times over stirring the leaf into the solvent for at least three minutes each time for a total of under 10 minutes in the chilled acetone which will maximize the extraction efficiency while minimizing the impurities extracted. Upon removal of the leaf from the acetone the solvent from the three extractions to the same batch of leaf (which should now be combined) will still contain a fairly significant amount of micron sized leaf particles which cloud the fluid and are so fine they cannot easily be filtered but can be separated from the extraction solvent by simply waiting for them to fall out of the fluid and into the bottom of the collection container which can take up to 24 hours.

Once the fine leaf sediments have fallen out of the fluid the solvent is then carefully poured off of them into another clean container and completely evaporated. Upon complete evaporation and drying the remaining extract solids are usually at least 30 percent pure, purer if having extracted the leaf at a lower temperature or for a shorter period of time. The extract can then be further purified by washing the extract solids with relatively small amounts of 99% isopropyl by mixing this solvent and the extract together in a small glass container containing a ratio of 50% dried extract to the entire volume of 99% isopropyl in a glass which when stirred into the solvent for one minute or more will dilute a significant portion of the waxy lipids into the solvent while leaving the majority of the salvinorin behind which is collected from the bottom of the container after settling. Each time the extract is washed the fine particles of salvinorin stirred up into the fluid may take a half hour to completely settle to the bottom of the container of solvent if working with one ounce of isopropyl, but can take much longer for larger volumes of fluid.

Due to the fairly low solubility of salvinorin to room temperature isopropyl, which is close to 3/4 of a milligram per ml, this method will remove most of the dark impurities from the extract in three to four washes at a cost of close to 25% of the total yield due to some of the salvinorin being removed with the dark isopropyl each time the solvent is poured off of the salvinorin particles which have settled to the bottom of the glass. The purity of the salvinorin from three washes with 99% isopropyl can be up to 80%, higher purity with additional washes to the extract but at reducing yield. This simple extraction and refinement method works very well but due to losses should not be attempted on less than 100 grams of dried leaf at a time, especially if new to the method. The area which requires the most practice is washing the extract solids with isopropyl, use as little as necessary. For a 100 gram extraction of dried leaf no more than 10 ml of isopropyl is needed for each wash of the extract, more than that and you might dissolve too much of the salvinorin into the solvent which is poured off each time significantly reducing total remaining yield.

**Caution:** Due to sensitivity to light keep salvinorin containing solvents out of UV light exposure while waiting for leaf sediments to fall out of the fluid and during evaporation. The above refinement method using isopropyl will not work if the solvent contains much water, only use 99% isopropyl.

**Warning:** Due to the high potency of extremely minute amounts of purified salvinorin never attempt to directly dose with this material, especially through inhaling heated vapors or smoking.

Use this process at your own risk! If you are not trained in the use of flammable solvents do not use them. This extraction document is not intended to imply that the use of this process is suitable for the production or manufacture of any kind of drug or human consumable.