

5-MeO-DMT : HCL to FB Conversion Method For Optimization of Yield:

Equipment needed: (all glassware should be Borosilicate glass)

- Beaker set 50ml, 150ml, 250ml
- Flask set, 50ml, 100ml, 150ml
- Graduated cylinders (2-3) 10ml, (1) 25ml
- Glass stir rod(s)
- (2-4) 150mm x 15mm glass petri dishes
- (1) StonyLab 125ml conical separatory funnel w/ 24/40 Joints & PTFE Stopcock
- (2-4) pipettes w/ bulbs
- Rechargeable multi-speed mini fan
- (2) razor scrapers w/ blades
- Small lab spatula or spoon
- Smart Weigh Gem20 High Precision Digital Milligram Scale 20 x .001g scale
- Small 1.5in squares of parchment baking paper, folded (for weighing)
- Electric tea kettle
- (2-3) 8oz. Hi-ball glasses or small glass bowls (for warming)
- Jellas Universal pH 0-14 test strips

Alt. equipment:

- Set of "Green Heat" reusable heat packs
- Collapsible mesh picnic screen tent
- Stainless steel spatula/wax carving set
- Eye protection
- Nitrile gloves

Supplies needed:

- Your HCL material...(1-3 grams)
- Sodium Carbonate - Na_2CO_3 (Soda Ash/Washing Soda)
- Dichloromethane (DCM) - CH_2Cl_2 (500ml bottle)
- Distilled water (gallon)
- Water (for warming)

Instructions:

It is best to prepare all necessary solutions and have them ready and on hand. It is also recommended to have two people on hand for this process. It is also highly recommended to keep all glassware warm throughout this process by keeping them immersed in a warm water bath to maximize yield. However, it must be duly noted that DCM has a low boiling ($39.6^\circ\text{C}/103.3^\circ\text{F}$) so one must be very careful not to overheat it.

- Place 30ml of DCM in a small flask
- In your 150ml beaker dissolve several grams of Sodium Carbonate in approx. 100ml of hot (but not boiling) distilled water. Stir vigorously with stir rod. Test a few drops on pH strip looking for 11-12 pH level. Place this in a bowl of hot water to stay warm.
- In your 250ml beaker dissolve (**1-3) grams of (weighed) HCL material into hot (but not boiling) distilled water, which will likely turn golden in color depending on the initial HCL material. Dissolve thoroughly stirring vigorously with stir rod, while immersing the beaker in a bowl of hot water.

- Once material is thoroughly dissolved, begin pouring in small amounts (10-30ml) of the Sodium Carbonate solution at a time, stirring vigorously throughout. This solution will cloud (crash/precipitate) turning it milky white.
- Continue stirring and solution will become less cloudy. Continue adding small amounts of the Sodium Carbonate and stirring as described above until no further crashing occurs.
- Next, add 10ml (per gram of material) of slightly warm DCM to the beaker. Note that the DCM will likely bubble and boil (*DCM has a low boiling point). Be careful to make sure you are using a big enough beaker in case this happens in order for your material not to bubble over. You may also need to remove the beaker from the warm water bath while stirring if the solution is overly boiling. Continue to stir vigorously.
- Be sure to save some (5ml-10ml) of your DCM solution for rinsing beakers.
- The solutions will separate into the cloudy SC solution at the top and the golden DCM solution on the bottom. Continue stirring and the golden FB material will begin building up on the sides of the beaker and possibly on the stir rod. This is why it is important to keep all glass surfaces warm.
- Prepare your separatory funnel by carefully immersing it in a sink of hot water, being mindful not to get any water inside the funnel. Place pre-warmed separatory funnel in the ring on the stand.
- Place 150mm petri dish under the separatory funnel and lower sep. funnel to just a few inches above the petri dish.
- Check to make sure the stopcock in the sep. funnel is closed. Pour entire contents of beaker with material, SC & DCM solutions into the 125ml sep. funnel while continuing gently swirling all materials.
- Pour remaining DCM into the 250ml beaker and swirl around to pick up any remaining traces of material from the bottom & sides of the beaker then pour this into sep. funnel and seal with the stopper. Be sure to open stopper from time to time while agitating to release any pressure built up in the funnel by the boiling DCM. Be careful with this process.
- While agitating this mixture consider holding the funnel between two small Green Heat packs to keep it slightly warmed throughout this process. You will likely see globules of FB solution build up in the top cloudy layer and fall into the golden DCM solution at the bottom of the funnel. Do not rush this process but be sure to keep the funnel warm.
- Once no further globules are evident, place the sep. funnel in the ring on the stand and carefully open the stopcock to release the golden DCM solution into the 150mm petri dish being very careful not to let the top cloudy aqueous layer through the valve.
- Place this petri dish with (first draw) solution in a dry place where it will not be disturbed.
- Take a second petri dish and place it under the sep. funnel for the "second draw".
- Remove sep. funnel from stand and warm again under running water.
- Take an additional 10-15ml of slightly warm DCM and add this to directly the sep. funnel.
- Swirl this around bringing it into contact with as much surface area within the funnel as possible to capture any remaining material. Take your time. Again, keeping the funnel warm with the Green Heat packs. More golden material will likely fall out of the aqueous solution into the DCM at the bottom of the funnel.
- Once this process seems complete, once again, gently place the sep. funnel in the ring on the stand and carefully open the stopcock to release the remaining golden DCM solution (second draw) into the second 150mm petri dish insuring not to let the top cloudy aqueous layer through the valve.
- The petri dishes will now have a thin layer of sticky DCM film with the FB material within it.
- Place both petri dishes on a level surface in a cool, dry, well ventilated place out of direct sunlight where they will not be disturbed. Consider placing the collapsible mesh picnic tent over the dishes to avoid dust getting into the dishes.
- Place the rechargeable mini fan on it's lowest possible setting facing the dishes, but outside of the mesh screen tent.
- Allow 24-48 hours to dry. Toward the end of this process consider placing small Green Heat packs underneath the petri dishes to expedite drying, however, do not overheat the dishes or oxidation may occur. Don't rush this process.
- Golden radial crystals will begin forming at the bottom of the dishes. Be sure to wait until the dishes are completely dry before harvesting your FB. *(See Below)
- Once dishes are fully dry use the razor scrapers to carefully scrape up all contents of the dishes. The stainless steel spatulas/carving utensils can be used to get into the bottom edges of the dishes.
- Once all the crystals have been scraped up, measure the yield using the parchment paper on the gem scale. Be sure to use the tare function after you set the paper square on the scale to get an accurate reading. It is suggested to always utilize the same paper square for this process.
- Finally transfer your FB material into a brown glass vial and keep in a cool, dry, dark place for storage avoiding heat & direct sunlight as much as possible for long term storage.

Some additional suggestions for maximizing yield:

- As mentioned previously, keeping all liquids and glassware warm while in process will improve yield.
- Do not discard any of your liquids. It is especially useful to hold on to the aqueous solution left over from this process. This will contain Sodium Carbonate and a fractional amount of your material. This aqueous solution can be utilized again when making your Sodium Carbonate solution the next time you do the process and will likely improve yield.
- You can also rinse your 250ml beaker with some additional DCM and save this in a small brown glass vial for use again in your next conversion process.
- Consider not cleaning your separatory funnel, as well, as there still may be some FB material left on the interior surfaces that can be retrieved in the next conversion process. Or, rinse with a little DCM and store this for the next usage.
- Larger quantities appear to yield a higher percentage of final FB material. 66% FB material obtained from 1 gram of HCL is average. However, following these procedures closely and utilizing 3gms of HCL has yielded up to 83% of FB material. An increased yield of 17%. Your mileage may vary.

Suggested Safety precautions:

- While all of these materials are generally safe and stable, using eye protection, gloves, etc. and working in a well-ventilated area, free from open flames is highly recommended.
- Sodium Carbonate is very easy to procure and work with and is non-toxic. See more details here: https://en.wikipedia.org/wiki/Sodium_carbonate
- DCM is available easily on the internet. It has a low level of toxicity but maybe a carcinogen. It has a low boiling point, can be volatile and should be always handled with care. It is especially recommended to avoid prolonged exposure, contact with skin or eyes and to be careful not to inhale any fumes, which are also flammable. See more details here: <https://en.wikipedia.org/wiki/Dichloromethane>
- Spills of any materials should be cleaned up right away and any exposure to skin should be washed thoroughly and immediately with ample soap and water.



This document is suggestive only. Many thanks to H.L.N., M.F., M.G., P.D., W.T. & X.K. for their invaluable knowledge, wisdom, assistance, input and direct contributions to its development.