The Reaction

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At this point, you may begin dreaming in the alpha state of mind , not unconscious sleep but an aware state of peaceful relaxation,, If you choose to come out of the alpha state, simply flex your arms and you will awaken, alert , feeling well rested and happy.

Crystals courtesy of heme from isopropyl

Flask

The flask used is often a flat bottom with a rubberized stopper, boiling , erlenmeyer, or a vacuum flask. The flask can be almost any glass device such as a bottle, champagne bottles are preferred because the can handle the pressure. Buy flasks and stoppers at a Home beer and wine brewing supplier. Coke bottles can be fit with a single large diameter hose leading outside for small batches

Sizes

Flask Size (ml)	Safest Maximum Weight of Ephedrine(gm)	Range of E weights (gm) high will tend to blow out the top
250	7.5	1 - 10
500	15	7 - 22
1000	30	15 - 50
2000	60	30 - 90

4000	120	60- 150

1 oz of ephedrine / 1000 ml of flask

The larger the flask the more important it is to heat it evenly, A new large flask will break on a hot plate that is too small.
In one week I broke a 12 liter and a 6 liter flask because I used too small of a heat source

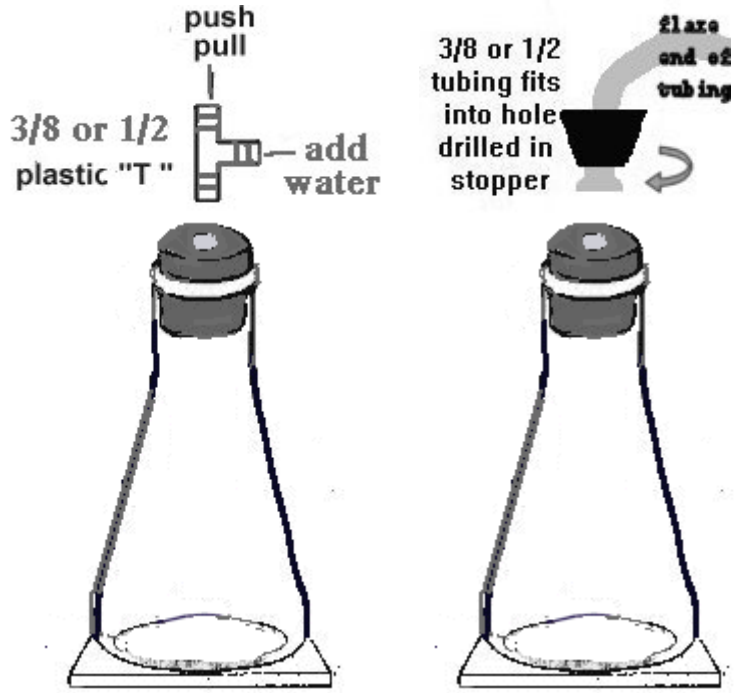
Stopper and hose

The stopper has a hole in it, to vent the gasses into the push/pull tanks, or to the outside.

For the push pull ,It is fitted with a 3 foot length of 1/2 inch, or 3/8 inch braided food grade plastic hose type tubing.
Almost any type of tubing may be used. It is variable. but needs to be somewhat stiff so it will not collapse

If venting outside, usually a 15 to 20 foot hose, longer is fine. can be thin walled since collapsing won't be a big factor when venting to the open air

The main thing is it should be clean, fairly new, and in good shape, and fit the stopper .
A dirty deteriorating hose will taint your reaction with particles of a deteriorated plastic hose, nasty.
Home depot has rubber stoppers all sizes in trays near the fasteners, and mirror hangers



Filter flasks work very well for a reaction flask but are sensitive to heat and may crack.
Larger flasks are sensitive to uneven heating and are more difficult to heat evenly.
A 12 Liter flask on a small hot plate will heat unevenly and crack. whereas a 6 liter will do fine on the same hot plate

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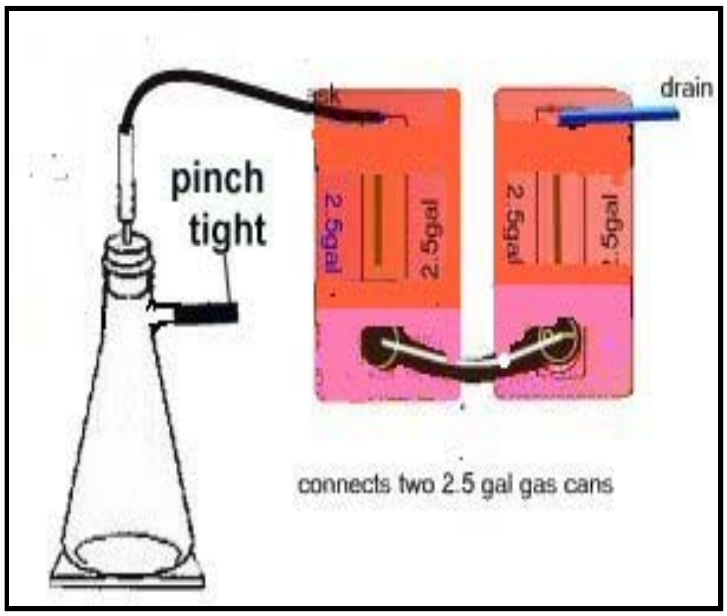
Push Pull unit - Anti smoke device

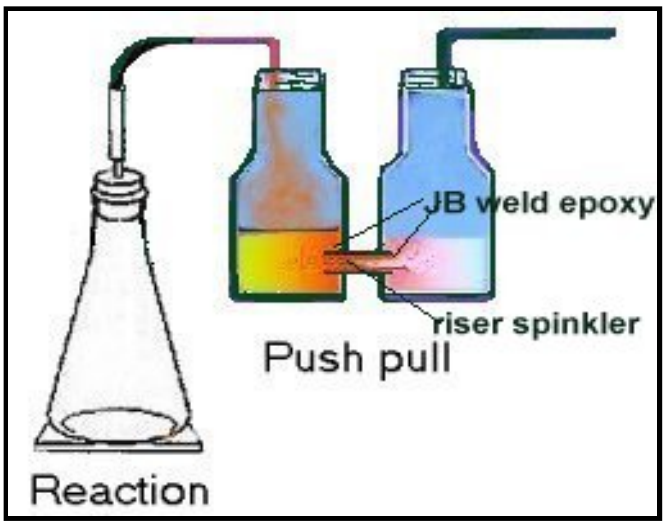
The Push /pull can be avoided if you have a hose leading from the reaction flask safely outside or away from anyone. It stinks and smokes, so best if done at night or in an out of the way area. In the city be careful because 2 oz of E will produce a lot of smoke.
The tubing extends from the reaction flask to the push/pull unit which is a gas /smoke trap, and pressure stabilizer.
Some gas still escapes, so a gas outlet may lead outside, or into the sewer.
Large quantities of Iodine can be recovered from these.

Here are examples of basic push/pull designs.



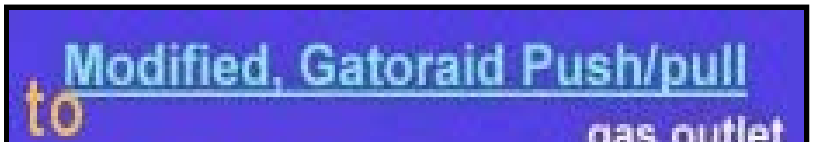
direct

In this example ,Two 2.5 gallon gas cans are used, the pour spouts are joinded together. The air inlet is hooked to the reaction flask. The flask in this example is a vacuum flask. The best is a long necked round bottom reaction flask The hose leading to the push pull unit can attach to the side port or the top.
If attached to the side, the main top opening can be used to add water or reagents.



direct

In this example an erlenmeyer flask is used along with two plastic gatoraid bottles, the bottles are joined with a sprinkler riser and JB weld. Notice that the two hoses, one hose leading to the reaction flask, and the other leading to the drain are **very near the top** of the push pull units, to prevent push pull water from being sucked into the hoses.



siphon

Use only enough water, so that if **all** the water ends up being pulled into the first tank, it will not be sucked into the reaction hose,
Only fill each of the tanks 1/3 to 1/2 full of water
or
Fill the first flask 3/4 full and leave the second flask empty

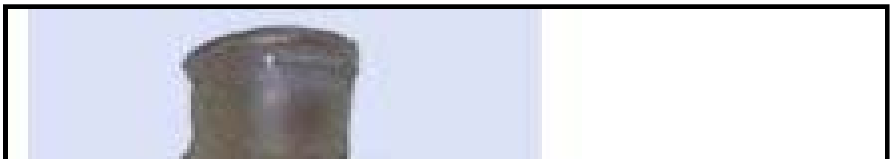
Sizes of push pull units- This is only generalized information, gathered from 20 or so different p/p units used. No actual experiments were performed, but the units were built and used.
Of the above designs the "direct connection" is much more sensitive to the pressure changes. The siphon designed tanks generally will not respond to the pull, and they require more pressure to move the fluids on the push. In addition the dual connections through the top with the increased pressure leads to gas leaks.
The direct connection is best.
A pair of 5 gallon water jugs with a siphon tube never did bubble any air into the second tank and seemed to slow the reaction down.
The 1 gallon tea jugs are great for up to 4 ounces of E

Already have the hole near the bottom to join the two tanks and an easy to drill plastic top.

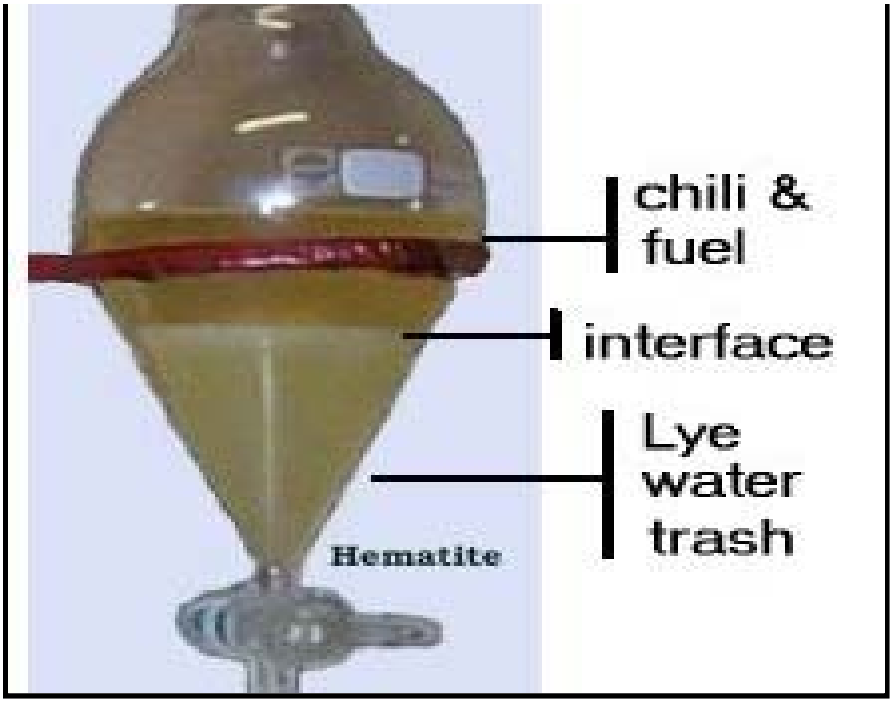
Less than one ounce - run the hose to the outside do the reaction at night, or two 1 liter bottles
1-2 ounces - two 2 liter soda bottles
2-4 ounces - two 1 gallon glass tea jugs
4 to 16 ounces- two 2-1/2 gallon gas cans -- This is probably the ideal size

Do not use 1 gallon water jugs, the plastic is too thin and they will collapse on the pull phase.

Separatory Funnel



Two main tools used to purify chili are the separatory funnel and the filter.
A caveman version uses a 2 liter coke bottle, with a small hole in the cap



operated with your finger. or Rubbermaid plastic container .. The separatory funnel is best because of it's shape near the bottom , allows you to cut it off at the exact drop you want.
Do not wash this with a soap or detergent or you will have Gakk in your chili.
To remove Gakk see re-crystallization

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Chemicals Ratios by weight

Ephedrine	Iodine crystals	Red Phosphorous	When to use
1	1.5	1	Tincture or poor quality of chems --- Matchbook RP use 2x -3x normal amount
1	1.5	0.6	My favorite uses excess iodine and RP - this insures a spontaneous reaction, and complete conversion of E to Meth, but is a rather violent reaction
1	1.0	0.33	4 oz or more good chemicals - methhead's suggested ratios
1	1.0	0.20	Lowest amount of RP used to convert 6+ ounces
1	1.2	0.7	What to use for less than an Oz

Remember the second time around for the RP it will contain Iodide unless well cleaned and dried , and therefore the actual amount of the RP is much less.
Because of the Iodide weight . So add 2x the RP if it was pre-used and not cleaned.
If the RP was washed in acetone and water then dried it is almost good as new
Some bad news 92% is the top yield of chili by weight, theoretically possible
It is common to obtain between 50% to 75% chili by weight and rarely 85%
The addition of aluminum to the reaction reduces the amount of RP needed, 5-6 soda can pop tops / oz of E

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Water

The common mistake is adding too much water, or too little water and not getting any reaction. Mix the reagents dry, then add 1 to 5 3 ml distilled water /ounce of E.

The mixture should be a thick wet mud,
As it fires off , the first thing that happens is it liquefies, and becomes wetter.
This is such a touchy part of the reaction, experience is the only way to be sure
If the reaction still does not fire, Use heat,
If heat does not do it or the mixture is very dry still add another 1-3 ml of water/ oz of E/
Then try heat again .
Keep alternating until it is goo like melted taffy. this should fire with heat. for sure.
If it is too wet, no problem, just put it on a heat source and let it boil very lightly for 2.5 hours

The quality of the water is extremely important to the quality of the chili, and to the yield.
Always used distilled water, and for even better results run the distilled water through a Britta water filter to remove metals, and other trash

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Hydrogen Peroxide

If using recycled phosphorus some suggest using a capful of hydrogen peroxide also.
I suggest you avoid using peroxide at all, if possible. The reason is peroxide in an acid environment will digest many organic molecules.
In addition peroxide will oxidize the RP,
In the reaction the peroxide will change HI into I2.
The bad aspect of heat, is that it tends to vaporize the HI . HI is reported to have a boiling point of 117 C, but this is a 58% solution with water.
The concentrations of HI you are using is many times above that. 4 to 6.5 molar
By adding peroxide some of this HI will turn into I2.
Peroxide will also strip off organic molecules that may be stuck on the RP like wax, this refreshes the RP at the same time providing I2,
and may be enough to kick in a dying reaction.
Additional heat is my preference. But try it and judge for yourself.

Cautionary Notes

Be prepared, the RP hitting the I2 will often start the reaction.
It may be impossible to see inside the flask, either from vapors or the rise of reactants. Either way, if the surface of the reactants contents can not be seen, act fast, because seconds count, shake it hard., or swirl the contents Keep swirling until you can determine what is going on. Look for a nice easy bubbling. If you fail to shake it down you will end up with very little, because the thick smoke indicates a fire is going on in the flask, this will destroy the E, or the contents of the flask may have expanded and are going to soon blow down the hose, Hard shaking will stop both of these situations allowing you to regain control, If you hesitate all will be lost
If the mixture starts to rise up, too high, swirl it lightly
Shaking before it blows out of the flask will save your whole reaction
Keep the wet towel handy, it will turn a potential disaster, into a laughable "won't do that shit, again" story

Phosphorous fire in flask or spewing out.
Too hot of a reaction WHAT TO DO

- Place your wet towel over it ,
- or Add water to the flask 1/3 of the volume of the flask should be enough
- You want to avoid the contents, that may be tossed out of the top of flask
- After it is controled get youself som fresh air , move the flask to a safe area, away from all flammables,
- The fumes are not a deadly toxin, but they are not healthy to breathe

- vaporous HI acid
- and Phosphine (not phosgene)

Phosphorous fire not in the flask

- Phosphorus is hell to extinguish once it catches fire.
- **Do Not Touch,** Phosphorous will stick to whatever it contacts and burn
- The amount of smoke is unfathomable, and will draw attention..
- Toss your wet towel over it, this will cut off its oxygen, and buy you time, maybe a minute. (don't worry, you will be moving at the speed of light,)
- Wet dirt is the best retardant, water may just blow it around if a lot of RP is on fire.
- But water will put it out if you flood it
- The worst thing to do is to run away, leaving it out of control, probably will result in your arrest.
- Most Fire extinguishers are not very effective against a phosphorous fire

SWIM was drying RP in the oven, unattended , when the glass bowl broke, fortunately the RP was damp
The first sign was an odd smell and difficulty breathing
Then the smoke was obvious
Two large fire extinguishers were emptied onto the 4 oz of RP and had no effect ,. the wet towel slowed the fire and the garden hose finally controlled it, by flooding everything.

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The Reaction Proceedure . . . . This reaction is exciting, and rapid. You must really focus your attention at this point. It is of -primary importance, that you have your wits about you. It is most difficult sometimes to determine if the reaction went to completion, so observe as much as possible and you will be able to make a determination.

Be sure to read Methhead's reaction, and Placebos reactions they are the best walk through. Eventually you will have the steps memorized, then you will be able to note subtle differences between the procedures, Before long you will be able to design your own procedure, this is when the fun begins. You become so aware and familiar with the reagents and the process, that you transcend anything you can read, and develop a sense for what to do. Creativity is the way to go, It becomes almost impossible to fail after a while. Even if you try to screw up it still works.

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Preparation and initiation of the phase one reaction

- Weigh out the Ephedrine and I2, in a ratio of 1.0(E) **:** 1.1(I2) , place in reaction flask.
- Mix the E and Iodine together. Keep them dry, They may liquefy don't worry about it at all.
- Place the flask of E and I2 in the freezer for a few minutes while you weigh out your phos (5 minutes or less). The chems are slightly chilled so you will have time to mix the RP in well

- Prepare a pan of hot water to heat up the flask, or use an electric stove, SWIM uses an electric WOK filled with sand with a temperature controller
    - Some use a warming tray, hot plate, or the stove, some heat is usually needed to get the reaction

to go to completion..
    - Avoid using an excessively high temperatures.

smaller grained.

- Tear 6-10 strips of sheet metal tape 6" long - 1 inch wide and have them ready to seal the stopper onto the flask
- Prepare a small cup of water, this will be added to the flask with an eye dropper or a syringe
- Remove the E and I2 from freezer and add the Red Phosphorous (chili powder).
- Mix it very well, it may begin to react with just dry reactants. You will smell and feel the HI as it hits your nose
- If the reaction is not happening or is slow and the flask has warmed to room temp, you want to coax the thing to gently begin
    - If the reactants are dry Add 2 ml of water /oz of E, shake it around,
    - Often the reactants will lump up into large balls of chems, watch these balls as they will melt when the reaction is about to begin.
    - if it is still dry and lumpy add 1-3 ml more of water / oz E
    - If no reaction place it on the heat 150 F
- If using homemade iodine from tincture you won't need to add any water, usually just mix and heat
- Increase the heat slowly until it reacts
- ***SWIM will toss in 3-4 pop tops from soft drink cans for the aluminum, it helps even out the reaction***
- Once it has begun carefully but quickly put on the vented stopper and strap it to the flask tightly with tape.
- Be very gentle with the reaction flask, It is a tense moment as the reaction is kicking in and your still tapping it up , plus you need to be watching for excessive smoking of an over reaction and possible RP fire in the flask. Just take your time and don't break anything, a few fumes won't hurt you, but a lot of them will.
- If you cannot seal the stopper in place and the reaction has begun and fumes are getting out of control , pour water in it, to stop the reaction and get away from the fumes, get some fresh air,
- This will begin phase one reaction and it usually lasts 30 - 45 minutes, This part of the reaction creates very little heat but will push out some gas
- This is where the Iodine is attaching to the E this phase can continue indefinately as OH will repalce I- and then I- repalaces OH- back and forth.
- Keep the reaction going by slightly increasing the heat if reaction slows
- Keep increasing the heat slowly
- If the reaction has been flooded with water, and looks soupy ,
    - add more of the three reactants, or
    - lightly boil it for several hours

Reaction Signs - Sometimes the two stages of the reaction are very distinct, at other times no

Phase 1 20 to 40 minutes

- Initially the thick mixture liquefies, and bubbles. The small bubbles have a silvery metallic sheen on the surface
- May notice some gas being pushed into the p/p
- Rise in the level of the solution, increases volume,
- As time goes on the gas production to the p/p decreases but the bubbling still continues
- White fog or light colored mist is OK
- continue heat to maintain an easy bubbling reaction.
- The heat is not creating the bubbles . the heat maintains the reaction that produces the gas bubbles
- **Trouble Volumous or excessive** amounts of thick yellow or red smoke (not good) over reaction, a

phosphorus fire in the flask, may reduce yield substantially. Shake the flask as soon as you see this to stop the fuming. There can be an actual fire in the flask with phosphorus burning, initiated by iodine and wax,

Sometimes you will have to boot it out of phase one into phase two, this may be accomplished in a variety of ways
Increase the heat
Add peroxide
Add a little water
Add more I2
Add more RP
Simply shaking it well may be enough

TOC**Phase 2**
After 30-40 minutes or if the bubbling begins to slow

1. If you held back some of the RP then Add the remainder of the RP, mix in well , add a capful of water if you think it is needed.
2. Optional: add a few grams of I2
3. Increase the heat very slowly, plan on taking 20 minutes to raise the heat to to 200 degrees F.

   200 F is internal flask temperature, the outside temp will be higher. Somewhere near 180 F phase two begins
4. At first you will notice that the metallic sheen on the surface of the bubbles will be silvery .
5. Soon the metallic sheen on the surface of the bubbles is no longer silver but is either yellow, greenish and even reddish.
6. The entire atmosphere in the flask has this color change.
7. The small bubbles seem to collapse in large holes (pac-man sign, like the game pac-man is munching big holes in the surface)
8. This mixture will slowly become more turbulent, loosing the small bubbles, the reactants rise, suddenly all hell seems to be breaking loose. (It is a charge and a half to see this.)

   Once seen you won't forget it, turn off the heat as this begins, if you remember.
   If you have followed the guide for flask sizes you have nothing to worry about
   "IF" it is going to blow out of the flask it will do it now. so be prepared to give the flask a light swirl before it gets even close to the top. or a hard shake, if needed .
   If you are concerned that you have too small of a flask, have some heat resistant gloves on, and eye protection
   shake once or Swirl the flask to keep it down below the 3/4 point of the flask
9. Major amounts of heat and gas are produced , it is a swirling maniac
10. the mixture expands , and may oscillate (expand and contract) several times
11. The push/ pull - will be pushing very hard, bubbling big time
12. At the end a tremendous pull may be noted .
13. **When complete -**

    The turbulence quickly stops, you did it, you have chili, there is no doubt about it.
    Reactants do not stick as tenaciously on side of flask, but will tend to flow down the sides, depending

on dilution .

14. The hue of the mixture changes from reddish purple to more dull or drab red purple color.
15. Tilt the flask if the reactants very slowly flow off the bottom , and no longer are stuck to the bottom, you are finished.
16. If uncertain heat it up to a easy boil , If nothing happens it is probably completed.

- Add water to the reaction mixture 100 ml of water for every ounce of initial ephedrine after the reaction mixture has cooled sufficiently
- Boil the solution for a few minutes (5 minutes), this will finish the reaction and and react any remaining I2 with the RP save you time by not having to refilter the mixture several times as noted below

Uh-Oh No REACTION or 'it never really fired off like you said it would'

Trouble -
Never realIy sure that it reacted !!!
Now it refuses to clear with filtering !!!!!
It seems to remain red!!!!!,
I see a iodine colored oil on the bottom of the flask IIIIII
It seems like iodine is everywhere!!!
STOP, the reaction did not take. It is still possible to save your batch and obtain a good yield .
Collect the fluids, RP and iodine put back in flask, filter paper, water and all.
Add more I2 and RP, and a condenser and begin boiling lightly for many hours (2.5 - 4).

You can even boil it in an open flask. You want to boil away most of the water. At the end of the boil,. it the contents are allowed to settle, there should be RP on the bottom and a yellow fluid on top. The yellow liquid is almost as viscous as motor oil.

Filtering and Purifying the Product -- GaKK Patrol

-

Problems with product quality ?????
Easiest solution is to use more water when washing the fuel and Meth
Filter using coffee filter and paper towel plug in a funnel

- If needed Re-filter through the same RP and filters again, continue refiltering until it has no added clearing effect.
- filtering should remove the cloudiness and most of the red color. It may require refilter 3 or 4 times. You end up with a clear yellow or colorless solution that can have many different odors. Can you identify the odor of meth,? Recycle the red phosphorous it is still good.

- **SAVE everything until you are done and sure you have your chili** Use a large glass or plastic vessel to store all the discharge in (a empty gallon water container is perfect)


by spitball

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To Avoid taking more than one a pH reading and still end up with great chili (click here)

- Create the chili free base (oil soluble) by raising the pH of the water soluble layer to pH 12.5-14,
  - Slowly add a cold (put ice in it) 20% Sodium Hydroxide solution(200 gm of NaOH dissolved in 1000 ml of d-water).
  - Add the NaOH slowly, Swirl the flask or shake lightly, Hard Shaking will create an emulsion and it will have to sit for hours before ot clears
  - **Important-** All pH measurements are made only on the water layer (lower layer) or polar solvent. To take a pH reading on the non-polar, upper oil. solvent is useless.
- Depending upon concentrations , The chili floats to the top, or will be seen still in the water as a thick white cloudiness
- Check the pH when above 12.5 Add a non polar solvent (Coleman, Charcoal lighter fluid, toluene, xylene, naphtha, ether, hexane ..etc.) at least 100 ml then 50 ml for every ounce. Shake Lightly. this should clear out much of the cloudiness from the lower layer as the chili moves up into the non-polar
- Adding rock salt (as much as will dissolve) causes the water to drop all remaining chili, releasing it to the oil and increases your yield.
- Swirl at this point , or shake easily .
- Allow the mixture to layer, 10-30 minutes or more, then separate, discarding (but saving)the lower water/lye layer.
- Depending on concentrations there may be a whitish waxy looking substance at the lower layer of the nonpolar, looks sorta like emulsion, This is often not speed . This is emulsion which rarely has anything of value in it. If in doubt as to where exactly to make the cut off between emulsion and non polar flush the lye /water layer and leave the emulsion with the non polar. After the initial water wash is drained swirl the separatory funnel very strongly , a snow storm of whitish globules will descend to the bottom. dump these they are emulsion, swirl repeatedly to remove this nasty gakk it is dependent upon pH and concentrations and 95% of the time is gakk at is best.
- Wash with water again and repeat the swirl to get after this emulsion, it is an impersonator of meth but is tainted because it is an altered molecule containing properties that place it in between polar and nonpolar, and is best removed because it tends to pull anions and cations with it and these will really taint your shit. This gakk will have properties similar to chili but not identical.
- Wash the free base and fuel solvent with d-water 3 times and separate each time (using 1 : 1 the

volume of (water : fuel)). Shake it well when doing the wash, so it is well moxed but do not shake hard and fast , this creates too many air bubbles in the solution. Add this wash water to your discard bucket along with the lye water

After three washes- make the salt of meth

- Add d-water again (a smaller volume than the fuel), it is easier to evaporate the less water you use

Add HCl drop wise, shaking lightly, test the pH add more HCl until the water layer tests between pH 7.0 and pH 8.0 . This is about 6 drops of 30% HCl (muriatic) per gram of expected product, this makes the chili a water soluble molecule again, and moves it down into the water layer.

If you are consistently getting dope that smokes burns dark and gakky
wash with more water
let it separate fully

Or simply do a recrystallization, which will give you "da kine", smooth and sweet.

- Separate the water from the non-polar again ,saving the water layer in your boiling bowl
- Evaporate the water away, using heat, and a hair dryer. The hair dryer will improve yield , it actually cools the solution by evaporation.
- But the hair dryer will add debris from the air, so don't use hair dryer on severely dusty, smoky, or smoggy days.

If the pH goes below pH 6.0, go ahead and evaporate the water away then wash the crushed crystals with acetone, to remove the acid.

In this HCl water soluble form, it is usable, and now illegal to posses without a license
you may desire to clean it up further if it is colored, stinky, gooey, tastes terrible. or if you want a better product

TOC

Variations Notes and stuff

- **Variations are as numerous as the number of cooks, no two cooks use exactly the same methods and some cooks never do the same thing twice. However certain details are always the same no matter who does it.**
- **Some mix red and I2 first , some mix e and red, some add water at the beginning others add it later.**
- **some mix the reactants for hours, some barely mix them at all before beginning the reaction**

- Heating the reactants before mixing is very dangerous and is 10 x as dangerous if you are using free base E. It will blow. The free base has to be handled carefully and not forced to react in any way.
- If doing over 1/2 oz and if not familiar with the free base, react the HCl salt instead.
- Variations -my latest heart throb is the use of sand placed inside of a wok or pan on the stove the reaction flask is placed in a depression in the hot sand and partially covered up. The value is the glassware does not contact the excessive heat of the stove top. Even heating, .A milder heating the sand takes a while to warm up so the reaction temperature slowly rises , This works great when evaporating solvents because the tendency toward over heating is reduced. The sand I use is the standard 60 or 30 pound washed silica sand from the hardware store it cost a couple of dollars for a 100 pound bag, the bag may not be easy for some to to carry, or even to pick up, so get some help if your not muscular . This is the same sand used in the sand filter the 60 pound is probably better it is finer grained.
- Variation - the common variation is to stir or not to stir. Certainly some mixing is desirable and too much mixing will quench the reaction. So somewhere in the middle find your niche between mixing and keeping the reaction alive.
- Definitely shake hard if things get out of control.
- It is important to be there when the phase two of the reaction kicks in, a little stirring here to keep the violent nature to a minimum and keep the reaction going is the critical link for a great yield or a pile of nothing at the end.
- Left to its own turbulent nature , if it is in a large flask the reaction will yield on the low side 50% to 70%.
- With optimal mild swirling to control the turbulence , the yield will approach 70% to 90% depending on the pills and other factors.
- Over stirring the reaction may not complete and you receive only Ephedrine as a product.
- Variation the application of heat is another area of differing opinions , some use heat no matter what others avoid it like the plague. The best method I believe is to simply add heat for a minute of two when needed to keep the reaction going.
- Use more if needed.
- All agree that too high of a temperature is not good for results.
- Dirty glassware, poor reagents, sloppy technique, from this point on affect your product in a big way.
- If you use soaps or detergents on your glassware, you introduce a sulfate that will turn your chili black and stinky when smoked
- Wash glassware with water and rinse with acetone, if something is stuck on the inside wash with acetone and salt, swirling the salt as an abrasive then rinse super good..
- At the end of the reaction, you may have heard of the chili being called an oil, well it looks golden, like an oil,
- but at this low pH (acidic), it is actually a water soluble salt of iodine.
- Considering the shitty quality of muriatic acid, it would be great to distill your own.
- If you are consistently getting dope that when smoked it burns dark, stinky and gakky, Most probably it will be fixed if you use more water in your washing of the fuel and free base. Be carefull to flush out the emmulsion with the waste water , that frothy, whitish, middle layer is full of crap. Use at least an amount of water equal to the volume of the fuel meth-base. your HCl first.
- ***Solubility, ions, polar, non-polar***
- Variation- as to when to add the nonpolar solution is a common point of contention, you want a nice debate, this will get you into the middle of a fanatical argument. Generally it is a good idea to add the non-polar before adding the base, the non-polar attracts the free amine (free base) E and M and helps them move more rapidly out of the polar solution..

- However there are times when you do not want a non-polar compound mixed in, Steam distilling , contamination, or to observe the E and M changing solubility.
- The non-polar is not absolutely needed most of the time , it depends on concentration, it may give a better yield, and does move the E and M much faster.
- But unless you have a specific reason to not do so, most newbees would be advised to add some non-polar prior to adding the strong base. Experiment when you have a few cooks behind you.
- CAUTION adding NaOH too fast, to a hot solution is dangerous. Many bees premix a 20% NaOH solution and then add ice cubes to that, others add it straight .
- The idea is to get the pH up above pH 12.5.
- Contrary to some literature in Erowid's site, only the amines and very similar compounds have this unusual ability to freely change solubility from water to oil base when the pH is changed, the fact that this is an uncommon property is the reason the A/B has been so effective in thwarting DEA attempts to prevent the use of ephedrine.
- Morphine, codeine , heroine, and cocaine are common examples they have CH-CH skeletal structures with the N-H and OH groups exposed.
- The CH hydrocarbon chains and rings (aliphatic and aromatic) are what is a non-polar polar molecule, like methane CH4, or benzene C6H6
- The -OH adds a degree of ionic polar like quality as in methanol CH3-OH, or phenol C6H5-OH.
- But it is the mainly the nitrogen =NH changing to =NH2+ in the presence of excess H+(acid) that gives the legendary Hydrogen bonding and full water(polar)(ionic) solubility, along with attracting anions like -Cl.
- Hydrogen bonding is an ass kicking ionic bond that is 1/5 as attractive as a full bore covalent bond.
- Now that is some stickiness. You will find hydrogen bonding when N, O or Fluorine are present.
- Generally these three atoms determine if a hydrocarbon will be water soluble.
- Free ions are water soluble in acidic or basic solutions, it is only when the net charge is negated that they precipitate Ag+ + -Cl --> AgCl(insoluble)
- ---

De-contamination procedure For cleaning up Chili quickly

- Crush up, the chili in a bowl with minimum of dry cold acetone (no water)
- Pour crystals and acetone into a filter
- Wash crystals by flushing with more dry acetone, until they are white, this removes the **acetone soluble junk**
- Optionally wash them with any of the non-polar solvents to remove **non-polar soluble junk**
- Wash off the non-polar solvent with acetone.
- ***Change to a clean collecting flask***
- Keeping crystals in the same filter. Add denatured alcohol to dissolve the chili and leave most salts and **insoluble** crap behind.
- It may take 10 minutes for all the chili to fully dissolve

For a quick clean evaporate the alcohol away

For a major purification use recrystallization

- Boil the filtered alcohol/chili mixture until a slight skin begins to form on the alcohol, add

about 10 ml of fresh alcohol to dissolve the skin again and add 20 ml of acetone, cover the container and place in freezer for 6 hours or more up to 24 hours, the longer the better and bigger will be the crystals.

- After the 6 hours, Filter the crystals cold and quickly, rinse lightly with a very small amount of ice cold alcohol, after the residual alcohol evaporates from the surface of the crystals this will give you some of the finest chili you have ever had.
- After washing with the alcohol as noted above , it is fun to place the crystals on a dark surface , spread them out to help the residual alcohol escape. Pull out the digital camera, and snap a few pictures of your beauties. These photos will be a source of enjoyment. Simply because it is rare to see so much stuff, looking so good. Soon it will be bagged and such and looses that magic quality of the untouched pure crystal. You will be one person in 1/2 of a million in the US that ever gets to see this.

Water Soluble Sulfates

If your chili looks clean and white but when you vaporize it leaves a nasty black residue , then you have water soluble sulfates that can be removed using the recrystallization method

Glass like shards and crystals

To get the bigger clear glass crystals, the final stage of drying should be slow, from dry alcohol seem best, with a little acetone added, then was with alcohol only

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Recrystallization

This is the same as presented above in **De-contamination procedure**

Re-crystallization of chili using methanol, denatured alcohol, or 91% isopropyl alc. will grow some very pretty, large crystals and will make your product more pure and much more potent. This is one procedure that is simplicity itself and always produces a major improvement with surprisingly little loss of product.

crystals, using denatured alc. and vision ware (Worlock)

After the chili was pulled out of the toluene (non-polar solution) using HCl and water, It was run through a filter and placed in a vision ware bowl for evaporation.

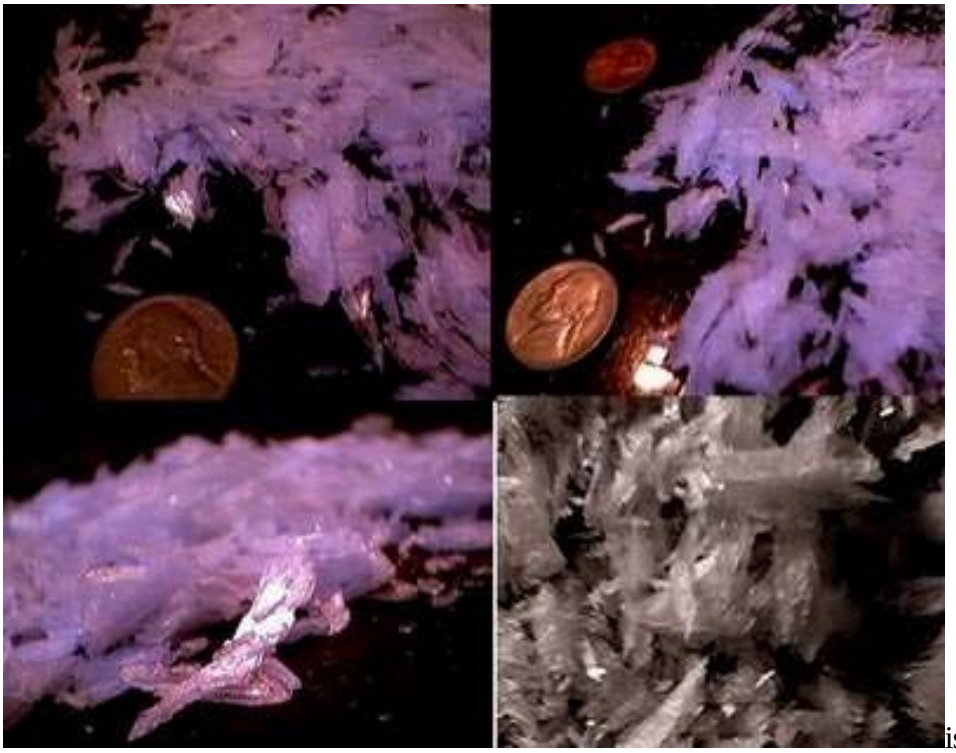
The water was evaporated leaving the crude raw Crystals.
These were crushed and washed with ice cold dry acetone.
The washed Crystals were then dissolved in hot denatured alc. the alcohol was boiled away until the first sign of skin forming or the first sign of crystallization noted. Remove from the heat add enough alcohol to remove the skinning so no more crystallization can be seen then add 20 ml of acetone, if it turns cloudy add alcohol drop wise until it is clear again cover and place in freezer 6 hours or more(overnight is great) you will return to find crystals floating in the liquor.
Rapidly filter out the cold crystals , then wash them with a little cold alcohol to remove any gakk on the surface and in the outer crystal layer, set out to dry..
All three steps were performed without ever removing the chili from the vision ware bowl.

Recrystallization details

The Chili is dissolved in a minimum amount of dry alcohol, this is heated, **USING a Safety fan (Always)**
as needed to get it to dissolve , bring it to a soft boil . Continue boiling until you begin to see the chili form crystals on the surface of the alcohol. Known as the ***Lynrd sign***.,
(The Lynrd sign?? Skynrd?? The chili forms a surface skin <yuk-yuk> it was a joke get it ?? Lynrd Skynrd!!!)
This is a ***super saturated solution*** . Add a little alcohol to dissolve the skin again, and add 20 ml of acetone
Then cover and set in freezer, as the temperature drops, crystals will form .
Leave in freezer for 6 to 12 hours or even longer. Generally the longer in the freezer the bigger and better will be the crystals.
The chili re-crystallizes as the temperature drops, the alcohol won't freeze.
As time goes on the crystals "digest". ***Digestion*** means the crystals are slowly re-modeled, the outer layers with impurities are stripped away a reform without the impurities. In addition the smaller crystals dissolve and become incorporated into the larger crystals because of volume(cubic) versus surface area(square) considerations
After which the resulting crystals were quickly cold filtered , washed with a little cold alcohol and dried.
The crystals should be rinsed lightly with alcohol wash off any of the mother liquor that is stuck to the crystals, and to remove the outer layer of crystal which is slightly impure

note for even better results:
The super saturated solution(dissolved in hot solvent) forms crystals faster than the hot but more dilute solution , but the more dilute allows better digestion and more pure crystals.
Life is such a trade off in every way.

Appearance:
The resulting crystals were sparkly, 1 cm x 2 mm x 0.5 mm very clear
up to 1 inch long and chunky

 isopropyl alc.

BioAssay:
Performed repeatedly, and it was determined that the resulting product was far superior to the original stock. The taste was greatly improved . Any nasty residue was essentially nonexistent. The overall potency was increased significantly. Enough to warrant the use of this technique in future productions.

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Final thoughts

I wish I could tell you more, but we have to stop somewhwere , and you will tire of my endless explanations, long before I ever get close to imparting what I think will be enough details. You may have many questions, still, but you will learn. The only way I could help you more is to be there when you do your first few batches, then we could discuss for hours the twists and turns and theories and potentials.
But as far as the written word , I feel I have already overloaded you, with details. Much of the info is repeated on purpose. Much of the info is already dated, my proceedures are already different now than what is written here. But I doubt a re write is forthcoming, because It is not safe anymore to just toss it up on the web, otherwise I would put forth the effort to update it all.
Besides to me it was always a game that was not safe to play very long. Because eventually you will get caught, dreaming. I think the statistics are 3 months before getting nailed, (that is a Bull Shit DEA idea of how effective they wannabee). If your not flaunting it in front of the cops, you can last a long time, years.
Think about it, the DEA is using numbers from those they catch, those they don't catch or rarely catch, are not even being entered statistically , and do not reflect realistically what is going on , so their numbers mean less than shit .
I have made a small fortune, never been close to being busted, I 'll never need to work, again.

If at first you don't succeed , before you try it again, analyze what went wrong !!!!
Other wise you will repeat the same error and will have learned nothing
At first you may have failures, mostly due to equipment or chemicals
Remember at this point you may still be a little green, but you have taken the the plunge and you know much

more than you suspect you know. The amount you have learned at the hive is enormous , so don't kid yourself into thinking your not getting it, more likely than not your are so close, and just one little thing is stopping you.

Take advantage of a failure to learn maximally from it, A failure is an important tool, use it!!

To figure out what went wrong, Backtrack to the point that you first noticed something was not right, there is more than enough descriptions of what to look for and when you did not see what you expected to see, The error occurred immediately before that.

Believe in your own skills is what I am saying, because there is no way you could have gotten this far without developing major amounts of savvy about this stuff.

When in doubt, either put it on a light boil for two hours, or add more NaOH to bring the pH up.

One main cause of initial failure is your Chemicals, everything at first is OTC because you have not yet developed the connections for supplies., and the OTC stuff has to be re-made to suit your needs.
The ephedrine must be clean and the govt. is constantly tweaking the stuff. They will try real hard to screw you over at least two times a year with their concoctions.

The Iodine the main source of energy for the reaction is touchy , if made from tincture , wash it repeatedly by shaking it hard in a 2 liter container (and not in a 4 ounce jar or by running water over it in a filter)
first wash it with "major" amounts of tap water for maybe 4-5 times , then finish it off with distilled water.
You may think 4-5 washings is excessive, but the last time I made some it was washed 8 times.
Use an excess of iodine 1.5x to 2.0 x ratio if unsure.

RP is only a problem if match-book stuff is used, you need a shit load if from match strikers because the contaminants , glass specifically alters your weighing. I have never used the matchbook RP but I have listened to those that have, and it will work, from the amount of glass and trash that is likely to have remained in the RP it is a good idea to use an equal weight of MB RP and Ephedrine

The Equipment will be OK if you follow the sizes used here, once you go to nano-sizes or to larger sizes you will begin to have problems, all the equipment needs resizing together, you can not just get a bigger reaction flask to make bigger batches, every step of the way you will be dogged by size problems, if you do.
.
To prepare everything properly is a pain in the ass , if doing it all OTC for the first time it may take you several days to clean up the E and Iodine and RP., but it is the formula for success, if it were easy anyone could do it, but everyone can't do this, it takes a special touch, you either have it, or you must learn it.

Once you make a batch you become a major asset and people want what you can create , stuff begins to come to you as if by magic, I am amazed at what people will trade for a gram of this shit. They begin to bring you better chemicals, or you pay them in speed to acquire chems for you. and "Viola" your home free. then it is as easy as measuring it out and mixing it together.

As time goes on you become intimately familiar with the properties of these Chemicals, and it will seem too easy, you will know what to do instinctively,

You have seen it all now, at least once, so the best thing to do is to get some experience behind you, and start cooking away, be a good observer..
90% of the screw ups are fixable easily, it is getting the stuff to react that should be your primary focus.
Once made you will get it out of the solution, believe me you will find a way.

Save everything until absolutely sure that you have product or until you know what went wrong.

SAVE EVERYTHING UNTIL ALL THE FINAL PRODUCT (METH) IS ACCOUNTED FOR.

recycle the I2 and Rp
even the nasty lye water contains recyclable Iodine

Ever take two stainless steel electrodes, hooking up a DC transformer and dropping the electrodes in the reaction waste water?
Electroplating flakes of iodine onto the anode, works better than using an oxidizer to recover the iodide, Set it up check it in a few days.

Calculating Yield

You can use this web site
http://www.shef.ac.uk/chemistry/chemputer/reaction-yields.html

Enter these values(without the spaces)
C10 H15 N O --- Ephedrine Freebase
C10 H15 N O (HCl) --- Ephedrine HCl
C10 H15 N (HCl) --- Methamphetamine HCl

then enter the weights you have obtained in grams

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or use the windows calculator

weight of final Methamphetamine
---------- x 100% = percentage by weight
weight of initial Ephedrine

example: yield by weight
If you began with 90 grams of Ephedrine, and ended up with 70 grams of chili

70 / 90 x 100% = 77% by weight

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or

Avagodro's number = 6 x10^23 molecules are in one mole

(weight of final Methamphetamine-HCl / 186)
---------- x 100% = percentage by molecule or mole
(weight of initial Ephedrine-HCl / 202)

70 gm / 186 mw = moles of Meth

90 gm / 202 mw = moles of Ephedrine

example: yield by mole
If you began with 90 grams of Ephedrine, and ended up with 70 grams of chili.

$$\frac{(70/186)}{(90/202)} \times 100\% = 84\% \text{ by mole}$$

The difference of 16 mw units(202 - 186 = 16) is the molecular weight of the oxygen that is removed from the ephedrine to make chili.