## Picric Acid Home Maunufacture

How to produce picric acid (2,4,6- trinitrophenol) at home from common ingedients.


Note that english is not my first language. I don't care about spelling or grammar - but i've done my best.
This method is based on the decriptions in "Improvised Kitchen Plastic Explosives II" by Tim Lewis using acetylsalicylic acid, sulfuric acid and either potassium or sodium nitrate. The ratios given there are 40 g acetylsalicylic acid, 150 ml sulfuric acid and 77 g potassium or 58 g sodium nitrate $=1: 3,75: 1,9$-acetylsalicylic acid : sulfuric acid : potassium nitrate
First time i attemted to produce PA (picric acid) i used the ratios mentioned in "Kitchen Improvised Blasting Caps" by Tim Lewis and Mega's site. They suggest to use 100 crushed aspirin tablets/ $37,5 \mathrm{~g}$ (very vague but some people mentioned the acetylsalicylic acid content to be $0,375 \mathrm{~g}$ per tablet - maybe standard in the US?), 700 ml sulfuric acid (!) and 75 g of either potassium or sodium nitrate. I think this is too much sulfuric acid: when i poured the nitrated mix in the crushed ice \& water it warmed so much all the ice melted and the shit was still warm. The yield was ca. 8 g from 30 g acetylsalicylic acid :-(

## acetylsalicylic acid purification

1. 120 aspirin tablets each containing 500 mg acetylsalicylic acid and 50 mg starch \& microcristalline cellulose were crushed to powder.
2. This powder was dumped in 600 ml of $60^{\circ} \mathrm{C}$ ethanol (denaturated brand with $1 \%$ butanone) causing the acetylsalicylic acid to dissolve.
3. The hot alcohol/acetylsalicylic acid solution was filtered through two coffee filters.
4. The normally clear liquid (a little brown/yellow coloring resulted from using non-bleached filter paper) was evaporated on a boiling waterbath in a 21 steelbowl. This took about 80 minutes.
5. The result: pure, crystalline acetylsalicylic acid.
6. The acetylsalicylic acid crystals were spread in a glass dish and heated in oven at $70^{\circ} \mathrm{C}$ for 30 minutes to evaporate the remaining ethanol. Result: 56 g ( 60 g theoretically)

## nitration

7. Then the 56 g acid crystals were put in a 500 ml erlenmeyerflask containing 220 ml concentrated sulfuric acid $96 \%$.
8. The acid was heated to dissolve the crystals. (Temp. around $70^{\circ} \mathrm{C}$ )
9. 220 ml sulfuric acid failed to dissolve all 56 g acetylsalicylic acid. Small portions sulfuric acid were added until all acetylsalicylic acid was dissolved. Finally a total of 330 ml sulfuric acid was used.
10. The dark red solution ( $\sim 400 \mathrm{ml}$ ) was poured in an 1000 ml erlenmeyerflask. To prevent spreading clouds of NOx a 100 ml erlenmeyerflask was put upside down in the mouth of the 1000 ml erlenmeyerflask and only removed for nitrate addition.
11. The addition of 115 g dry potassium nitrate (outside) was carried out in small portions using a folded piece of paper. This took 75 minutes. (The color of the solution changes with the addition of the nitrate from very dark red to an yellow/orange tone.)
12. After all potassium nitrate was added the solution was allowed to cool to room temperature. The hot liquid was clear, while cooling many tiny yellow crystals precipated until it was a more or less thick slurry. (similar to AP slurry)

## precipitation \& purification

13. A $1,5 \mathrm{l}$ glass standing in a plastic bowl was filled with 750 g fine crushed ice (distilled water) and 250 ml cold distilled water.
14. The acid was poured slowly into the ice/water mix. Because the acid was poured not slowly enough a *big* foaming started and some of the yellow foam and liquid was lost by overflow. SHIT - i wanted to know the yield of this method! A little red-brown NOx gas was released too, i think it was trapped in the foam.
15. Most of the crystals collected at the bottom of the glass after 20 min , ca. 700 ml liquid were carefully poured off and replaced by 500 ml cold distilled water.
16. After waiting a few minutes for the crystals to settleagain, the content was filtered through a coffee filter. The resulting liquid was disposed and the crystals scooped out of the filter. (No metals here, use wood or plastic!) Result: 120 g of wet picric acid with unknown water content.
17. Now the 120 g picric acid crystals were dissolved in 300 ml boiling distilled water and then cooled to $25^{\circ} \mathrm{C}$. Again filtering through a coffee filter the crystals were scooped out of the filter and placed in a pyrex dish.

## drying \& further processing

18. The pyrex dish with the PA was placed in an oven set to $80^{\circ} \mathrm{C}$, which was checked with a digital thermometer. (most of the time the temp. was around $75^{\circ} \mathrm{C}$ ) It remained there for 120 minutes.
19. The total amount of dry PA was 44 g . What the fuck? There where 76 g water in the first filtered crystal portion??? Or are there so much impurities that dissolve in the washing??? I filtered at ca. $25^{\circ} \mathrm{C}$, perhaps cooling it down to let's say $10^{\circ} \mathrm{C}$ would increase the yield a little bit...
20. $4,4 \mathrm{~g}$ white candle wax and $2,2 \mathrm{~g}$ vaseline (peroleum jelly) were molten in a hot water bath, poured on the dry PA and kneaded in (suggested in KIPE // to produce a plastic explosive). However it didn't get very plastic although it's possible to form little balls that don't crumble. But without a container it will not hold together in larger quantities.
21. The 50 g explosive mix were put in a pill box and fired with a 2 g AP detonator. Very loud, but not as impressive as i thought. Maybe the wax shit wasn't the best idea, it becomes a little insensitive.


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