**I've listed a few out of about 200 explosives I'm planning on listing in this file. I haven't looked up any of the explosives detonation velocities and I haven't given any information about them yet. This file is just a preview. I haven't even developed a standard layout for the file and I only have pics for one explosive. Before you try making ANY of these, look them up or ask for info about at the forum. I haven't listed any of the explosives properties or any addition information. In the future this file will look a lot different and will have lots of pics. I'm not responsible for any of your actions after reading my educational file.**

**Any questions email me at alengosvig@yahoo.com**

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## Acetone Peroxide

**Materials:**

**120 ml 35% hydrogen peroxide**
**96 ml acetone**
**30 ml 34% hydrochloric acid**

**sodium bicarbonate**

**Procedure:**

**1) Cool a beaker containing 120 ml of 35% hydrogen peroxide to 0 degrees Celsius in an ice bath.**
**2) Add 96 ml of acetone to the beaker while stirring and let cool back to 0 degrees Celsius.**
**3) Slowly add 30 ml of 34% hydrochloric acid to the beaker while stirring. keep the temperature of the solution at 0 degrees while adding the hydrochloric acid.**
**4) Let the solution sit in the ice bath for 3 hours and filter of the precipitate. You may have to replace the ice.**
**5) Wash the precipitate with a solution of 40g of sodium bicarbonate and 900 ml of distilled water.**
**6) Wash the precipitate with 1L of distilled water and let dry.**

## HMTD

**Materials:**

**235g 30% hydrogen peroxide**
**70g hexamine**
**316g 30% hydrochloric acid**
**Sodium bicarbonate**

**Procedure:**

**1) Place a beaker containing 235g of 30% hydrogen peroxide in an ice bath and cool to 0 degrees Celsius.**
**2) Add 70g of hexamine to the beaker while stirring and continue stirring until it's all dissolved.**
**3) While stirring, slowly add 316g of 30% hydrochloric acid to the beaker. Don't let the temperature of the solution rise above 5 degrees Celsius while adding the hydrochloric acid.**
**4) Continue stirring for 10 minutes.**
**5) Let the solution sit in an ice bath for 2 hours. You may have to replace the ice in the ice bath.**
**6) Filter off the precipitate and place the filtrate in another beaker and place in a fridge for 12 hours.**
**7) Wash the precipitate with a solution of 30g of sodium bicarbonate and 800 ml of distilled water.**
**8) Wash the precipitate with 1L of distilled water and let dry.**
**9) After the filtrate has sit in a fridge for 12 hours, wash it the same way the first precipitate was washed in steps 7 and 8.**
**10) Both precipitates are HMTD. Let it dry.**

## DDNP 1

**Materials:**

**6g methyl green (indicator no. 684)**
**480g sodium picramate**
**386 ml 35% hydrochloric acid**
**163g sodium nitrite**

**Procedure:**
**1) In a beaker, add 480g of sodium picramate to 6L of water and stir for 5 minutes. This will create a suspension of sodium picramate in water.**
**2) Add 6g of methyl green.**
**3) In a separate beaker, add 386 ml of 35% hydrochloric acid to 480 ml of water.**
**4) While vigorously stirring the suspension, add the hydrochloric acid solution.**
**5) Cool the suspension to 10 degrees Celsius by using a cold water bath.**
**6) In another beaker, dissolve 163 grams of sodium nitrite in 720 ml of water.**
**7) While stirring, slowly add the solution prepared in step 6 drop by drop to the suspension while keeping the temperature of the suspension at 10 degrees Celsius. The addition of the solution prepared in step 6 should take 25 minutes.**
**8) Continue stirring for one hour while maintaining the temperature at 10 degrees Celsius**
**9) Let the liquid sit undisturbed until all of the precipitate in the liquid has settled at the bottom of the beaker.**

**10) Carefully pour off and discard as much of the liquid in the beaker as possible without pouring out the precipitate.**
**11) Add 500 ml of water to the precipitate and stir for 10 minutes and allow the precipitate to settle at the bottom of the beaker.**
**12 )Pour off as much of the liquid above the precipitate without pouring out the precipitate. Repeat this process 2 more times using 500 ml of water each time.**
**13) Filter the precipitate and let dry.**

**DDNP 2**

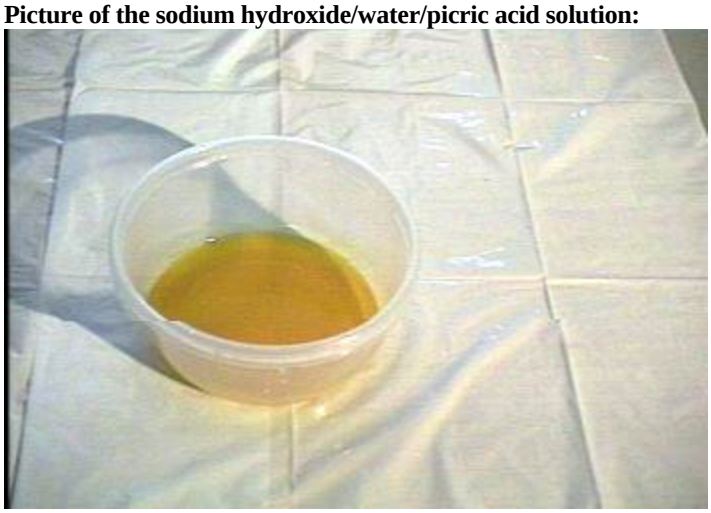
**Materials:**

**1) Picric acid**
**2) 50% Sulphuric acid**
**3) Potassium Nitrate**
**4) Sodium hydroxide**
**5) Distilled water**
**6) Sulphur**

**Procedure:**

**1) In a beaker add 1g of sodium hydroxide to 60 ml of warm distilled water and stir until dissolved.**
**2) While stirring the water/sodium hydroxide solution, add 6g of picric acid and stir until dissolved. Set this solution aside.**

**Picture of the sodium hydroxide/water/picric acid solution:**

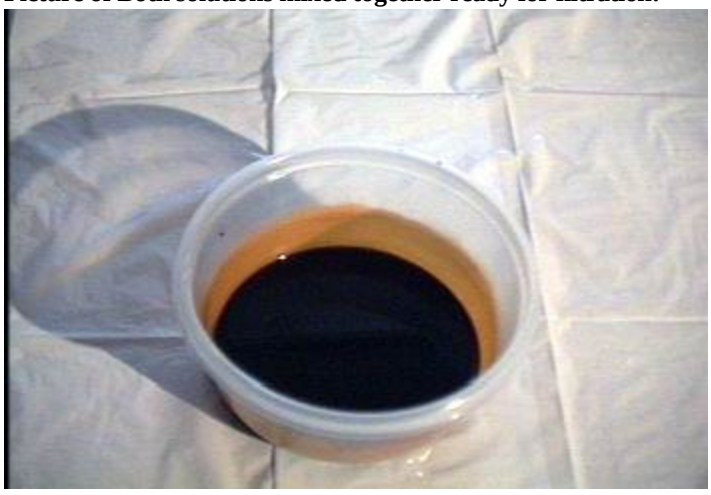


**3) In another beaker, add 5g of sodium hydroxide and 5g of sulphur to 3 ml of distilled water while stirring.**
**4) Heat the sodium hydroxide/water/sulphur on a simmering water bath until it turns dark red then remove it from the heat.**

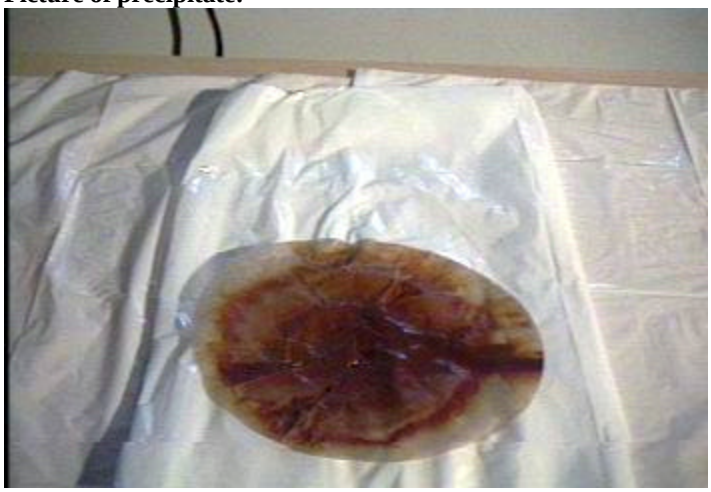
**Picture of the sulphur/water/sodium hydroxide solution:**

**5) While stirring the solution made in step 2, slowly add the solution made in step 4 and let sit for 2 hours then filter off the precipitate and discard the liquid. Set the precipitate aside.**

**Picture of Both solutions mixed together ready for filtration:**



**Picture of precipitate:**



**6) In another beaker, boil 120g of distilled water and remove from the heat source.**

**7) After removing the beaker from the heat source, quickly add the precipitate collected in step 5 to the hot water and stir for one minute.**
**8) While the liquid is still hot, filter it and discard any solids collected. Keep the filtrate.**
**9) Drop by drop, add 50% sulpuric acid to the filtrate from step 8 until the liquid turns orange/brown then let it sit for 10 minutes. Stir occasionally.**
**10) Add an additional 5g of 50% sulphuric acid to the filtrate and let the solution sit for 30 minutes.**
**11) In another beaker, dissolve 3.5g of kno3 in 160 ml of distilled water.**
**12) While stirring the solution made in step 10, add the solution made in step 11. Let the solution sit for 24 hours and filter off the DDNP precipitate.**
**13) Wash the precipitate with distilled water.**

## Methylpicric acid

**Materials:**

**21.6 g m-cresol**
**15 g sodium nitrite**
**8 g sodium hydroxide**
**20 ml 90% fuming nitric acid**
**100 ml 60% nitric acid**

**Procedure:**

**1) In a beaker, dissolve 15g of sodium nitrite and 8g of sodium hydroxide in 40 ml of water.**
**2) While stirring, add 21.6g of m-cresol to the solution.**
**3) Place 100 grams crushed ice and 20 ml of 90% nitric in a beaker and cool it to 0 degrees Celsius in an ice bath.**
**4) While stirring, add the sodium nitrite/sodium hydroxide/m-cresol solution drop by drop to the beaker containing crushed ice/nitric acid while keeping the temperature of the crushed ice/nitric acid at 0 degrees Celsius.**
**5) After the addition, remove the beaker from the ice bath and allow it to warm to room temperature.**
**6) Place the beaker in a cold water bath for 20 minutes to form a slurry.**
**7) After 20 minutes, add 100 ml of 60% nitric acid to a separate beaker and heat it to 95 degrees Celsius.**
**8) When the temperature of the 60% nitric acid reaches 95 degrees Celsius remove it from the heat source and slowly add the slurry formed in step 5 into the hot nitric acid while vigorously stirring.**
**9) Heat the mixture to 95 degrees Celsius and hold it there for one hour while stirring.**
**10) Remove the beaker from the heat source and allow the beaker to cool to room temperature.**
**11) Add the contents of the beaker to 1000 ml of cold water and stir the entire mixture for 5 minutes.**
**12) Filter off the precipitate and wash the it with 1000 ml of cold water and allow to dry.**

## Picric acid 1

**Materials:**

**250 aspirin tablets each containing 325 mg acetylsalicylic acid**
**440 ml 98% sulphuric acid**
**153g potassium nitrate**
**1L isopropyl alcohol**

**Procedure:**

**1) Powder 250 aspiring tablets and place the powder in a beaker.**
**2) In another beaker, heat 1L of isopropyl alcohol and add it to the beaker containing the powdered aspirin.**

**3) Stir for 10 minutes then filter out and discard any solids collected.**
**4) Pour the filtrate into a shallow ceramic dish and heat in a simmering water bath until all of the isopropyl alcohol has evaporated and only acetylsalicylic acid remains.**
**5) Place the ceramic dish containing the acetylsalicylic acid in an oven set at 65 degrees Celsius for about 45 minutes to dry off any remaining moisture.**
**6) In another beaker, add the acetylsalicylic acid to 440 ml of 98% sulphuric acid stir for 5 minutes.**
**7) Heat the beaker to 70 degrees Celsius and hold it there while stirring until all of the acetylsalicylic acid has dissolved.**
**8) While vigorously stirring, slowly add 153g of potassium nitrate to the sulphuric acid/acetylsalicylic acid solution. The addition should take about 1 hour and 20 minutes.**
**9) Let the solution cool to room temperature then cool it to 10 degrees Celsius in an ice bath.**
**10) In another beaker, add 1kg of crushed ice to 400 ml cold water,**
**11) Slowly, while stirring the ice/water, add the contents of the beaker. This should precipitate out the picric acid.**
**12) Stir for 5 minutes and then let it sit for 15 minutes to let the precipitate settle at the bottom of the beaker.**
**13) Carefully pour off about 1L of the liquid and add 500 ml of cold water.**
**14) Again, wait 15 minutes for the picric acid to settle at the bottom of the beaker.**
**15) Filter out the picric acid and discard the filtrate.**
**16) Add the picric acid to another shallow ceramic dish and place it inside a oven set to 50 degrees Celsius for 3 hours.**
**17) In a beaker add the picric acid to 300ml of boiling water and stir. Add more water if all of the picric acid doesn't dissolve.**
**18) Let the beaker cool to room temperature then cool it to 5 degrees Celsius in an ice bath.**
**19) Filter out the precipitate and discard the filtrate.**
**20) Again, Add the picric acid to another shallow ceramic dish and place it inside a oven set to 50 degrees Celsius for 3 hours.**

## Picric acid 2

**Materials:**

**47g phenol**
**21g sodium hydroxide**
**43g sodium nitrite**
**400ml 25% nitric acid**
**1L 90% nitric acid**

**Procedure:**

**1) In a beaker, dissolve 21g of sodium hydroxide and 43g of sodium nitrite in 500 ml of water.**
**2) Cool the solution in a cold water bath and add 47g of phenol while stirring and keeping the temperature below 20 degrees Celsius.**
**3) Place the solution in a ice/salt bath and cool it to –5 degrees Celsius.**
**4) While keeping the temperature of the solution at –5 degrees Celsius, slowly add 400ml 26% nitric acid.**
**5) Keep the temperature of the solution at –5 for 30 minutes then continue stirring to form a slurry.**
**6) Heat 1L of 90% nitric acid to 50 degrees Celsius.**
**7) Slowly add the slurry to the nitric acid while constantly stirring and maintaining the temperature at 50 degrees Celsius.**
**8) Raise the temperature of the solution to 96 degrees Celsius and hold it there while stirring for 3 hours.**
**9) Remove the beaker from the heat source and allow the solution to cool to room temperature.**
**10) Add the solution to 1500 ml of cold water and filter off the precipitate.**
**11) Wash the picric acid precipitate with 500 ml of cold water.**
**12) Add the picric acid to a shallow ceramic dish and place it inside a oven set to 50 degrees Celsius for 3 hours.**

## Methylene Dinitramine

**Materials:**

**760 ml 99% nitric acid**
**204 g methylene diformamide**
**760 ml acetic anhydride**
**200 ml 99% formic acid**
**120 ml benzene**

**Procedure:**

**1) While stirring, add 204 grams of methylene diformamide to 760 ml acetic anhydride in a beaker. Cool this mixture to -5 degrees Celsius in an ice bath.**
**2) Pour 760 ml of 99% nitric acid into another beaker and cool to -5 degrees Celsius in an ice bath.**
**3) While rapidly stirring, quickly add the 99% nitric acid to the methylene diformamide/acetic anhydride mixture. The addition should be quick but don't let the temperature rise above -5 degrees Celsius.**
**4) Stir the mixture for 5 hours while keeping the temperature at around -5 degrees Celsius.**
**5) In a beaker, combine 1500 ml of cold water and 1.5 kg of ice.**
**6) Slowly pour the solution prepared in step 3 over the ice while stirring the ice.**
**7) Let the ice melt and collect the precipitate.**
**8) Wash the precipitate with three 200 ml portions of cold water and let dry.**
**9) While stirring, add the product collected in step 7 to a beaker containing 200 ml of 99% formic acid and stir the mixture for 12 hours.**
**10) After 12 hours, filter off the small amount of product that has precipitated. This precipitate is methylene dinitramine. Set it aside.**
**11) Heat the liquid to 65 degrees Celsius and hold it there for 30 minutes while stirring.**
**12) While still hot, filter the liquid and discard any solids collected.**
**13) Let the liquid cool to room temperature then cool it in an ice bath.**
**14.) Add the small amount of precipitate which was collected in step 10 to the beaker containing the formic acid/methylene dinitramine solution.**
**15) Let the mixture sit undisturbed for 8 hours then filter off the precipitate and wash with 60 ml of benzene. This precipitate is methylene dinitramine. Set this aside to dry.**
**16) Pour the filtered liquid into a shallow dish and let the liquid evaporate until only 50% of the original volume remains.**
**17) Add the remaining liquid in the shallow dish to a beaker and place cool it in an ice bath.**
**18) Add a small amount of the precipitate collected in step 15 to the beaker containing the remaining formic acid/methylene dinitramine solution and allow the mixture to sit undisturbed for 8 hours.**
**19) After 8 hours, filter off the methylene dinitramine and wash with 60 ml of benzene. Add this to the methylene dinitramine collected in step 10.**

## ANFO B

**Materials:**

**875 g urea**
**4090 g ammonium nitrate**
**13 g Gengel E2**
**2.5 g sodium nitrite**
**35 g diesel fuel**
**5 g zinc chromate**

**Procedure:**

**1) Thoroughly mix 875g of urea and 875g of ammonium nitrate in a plastic bag and add to a beaker.**
**2) Very slowly heat the beaker to exactly 60 degrees Celsius. The mixture should become fluid like.**
**3) When the mixture has become fluid like, stir for 35 minutes.**

**4) Add 13g of Gengel E2 and stir for 15 minutes.**
**5) Add 2.5g of sodium nitrite, 35g of diesel fuel, and 5g of zinc chromate to the mixture and stir vigorously for a minute.**
**6) Add 3215g of ammonium nitrate and stir for 35 minutes then remove from heat.**
**7) Pour the liquid into container and let dry for 1 week.**

## Ethylenediamine Dinitrate

**Materials:**

**17g ethylenediamine**
**50.3g 70% nitric acid**
**307g 95% ethanol**

**Procedure:**

**1) Add 39.5g of water and 17g of ethylenediamine to a beaker.**
**2) Place the water/ethylenediamine mixture in an ice bath.**
**3) While stirring, add 50.3g of 70% nitric acid to the beaker drop by drop while keeping the temperature of the solution at 20 degrees Celsius.**
**4) Transfer the mixture into another beaker and place the beaker in an ice bath.**
**5) Add 307g of 95% ethanol to a separate beaker and cool to 0 degrees Celsius in an ice bath.**
**6) While stirring the nitric acid/water/ethylenediamine solution, add the ethanol.**
**7) After adding the ethanol, stir the mixture for 35 minutes and filter off the precipitate.**
**8) Wash the precipitate with 500g of ethanol and let dry.**

## 4,6-Dinitroresorcinol

**Materials:**

**500 ml 70% nitric acid**
**435 ml 90% nitric acid**
**30 ml 98% sulphuric acid**
**100 g resorcinol diacetate**
**40 g urea**

**Procedure:**

**1) Pour 500 ml of 70% nitric acid into a beaker and add 40g of urea.**
**2) Cool the solution to 0 degrees Celsius in an ice bath.**
**3) While vigorously stirring, slowly add the resorcinol diacetate to the nitric acid/urea solution over a period of 20 minutes.**
**4) Stir the solution for one hour.**
**5) Slowly add 435 ml of 90% nitric acid to the solution prepared In step 3 and filter out the 4,6-Dinitroresorcinol precipitate and set it aside.**
**6) Place 250g of ice to a beaker and add the filtrate to this.**
**7) Let the ice melt and filter out the 4,6-Dinitroresorcinol using the same filter used in step 3.**
**8) Add the precipitate from step 3 and step 5 together and wash with 500 ml of cold water.**

## Hexanitrobiphenyl

**Materials:**

**20g picryl chloride**
**400 ml ethylene dichloride**
**8.8g copper powder**

**100 ml acetone**

**Procedure:**

**1) Add 20g of picryl chloride and 400 ml of ethylene dichloride to a flask and stir until all of the picryl chloride has dissolved.**
**2) Heat the solution to 75 degrees Celsius and slowly add 8.8g of copper powder in small portions while vigorously stirring.**
**3) Equip the flask with a condenser and reflux the solution at 84 degrees Celsius for 2 hours.**
**4) Remove the flask from the heat source and allow the mixture to cool to room temperature.**
**5) Filter the liquid in the flask and wash the precipitate with 40 ml of water, and allow to dry.**
**6) Recrystallize the product from 100 ml of acetone then wash with 400 ml of water and allow to dry.**

## 2,4-Dinitrophenol

**Materials:**

**94g phenol**
**86g sodium nitrite**
**42g sodium hydroxide**
**1000g crushed ice**
**800 ml 26% nitric acid**
**400 ml 60% nitric acid**

**Procedure:**

**1) In a beaker, add 42g of sodium hydroxide, 86g of sodium nitrite and 1000 ml of water.**
**2) Add 94g phenol while stirring and keeping the temperature of the solution at room temperature. An ice bath can be used if needed.**
**3) Place the beaker in an ice batch and add 1000g of crushed ice to the beaker.**
**4) Slowly add 800 ml of 26% nitric acid to the beaker over a period of 35 minutes while stirring. Make sure the temperature doesn't rise above room temperature.**
**5) Using an ice bath, lower the temperature to 5 degrees Celsius and hold it there for 35 minutes.**
**6) Add 400 ml of 60% nitric acid to a separate beaker and heat to 60 degrees Celsius.**
**7) Slowly add the contents of the first beaker to the beaker containing 400 ml of nitric acid while stirring. The addition should take 30 minutes and the temperature of the mixture must be held at 60 degrees Celsius throughout the addition.**
**8) Heat the beaker to 90 degrees Celsius and hold it there for 1.5 hours.**
**9) Remove from heat source and allow to cool to room temperature.**
**10) Filter off the precipitate and wash with 100 ml of water, then dry.**

## Trinitrotoluene

**Materials:**

**115g toluene**
**540g potassium nitrate**
**5.5kg methylene chloride**
**200g 70% sulphuric acid**
**2098g 98% sulphuric acid**

**Procedure:**

**Part 1:**

**1) Add 1047.5g of 98% sulphuric acid to a beaker and cool to 0 degrees Celsius in an ice bath.**

**2) While stirring the sulphuric acid and keeping its temperature at 0 degrees Celsius, slowly add 540g potassium nitrate over a time period of 20 minutes.**
**3) Over a 20 minute time period, add 1365 ml of cold water while stirring and keeping the temperature at 0 degrees Celsius.**
**4) Remove the beaker from the ice bath and extract the acid mixture with seven 785.7 ml portions of methylene chloride.**
**5) Combine all 7 portions of methylene chloride and filter the liquid and throw away any solids collected in the filter.**

**Part 2:**

**1) Add 1050.5ml of 98% sulphuric acid and the methylene chloride used in step 5 of from part 1 to a beaker and cool the mixture to 0 degrees Celsius using an ice bath.**
**2) Over a period of 20 minutes, add 115g toluene to the sulphuric acid/the methylene chloride mixture while vigorously stirring and keeping the temperature at 0 degrees Celsius.**
**3) Remove the beaker from the ice bath and let it warm to room temperature and then heat the mixture to 70 degrees Celsius for 1 hour while vigorously stirring.**
**4) Raise the temperature of the mixture to 80 degrees Celsius and hold it there for one hour while vigorously stirring.**
**5) Remove from heat source and let the solution cool to room temperature.**
**6) Add 1000 ml of cold water and vigorously stir for 15 minutes.**
**7) Filter the mixture to collect precipitate. Set the filter with the precipitate in it aside.**
**8) Extract the upper methylene chloride layer with a seperatory funnel and add it to a distillation apparatus or beaker**
**9) You can either heat the solution at 40 degrees Celsius in a beaker until of the methylene chloride evaporates. You can also distill off the methylene chloride and re-use it. To distill it for re-use, heat the solution the in a distillation apparatus 40 degrees Celsius and hold it at that temperature until all of the methylene chloride is distilled and dry solid remains.**
**10) When only dry solid remains, remove the apparatus from the heat and allow it t cool to room temperature.**
**11) Remove the TNT from the flask and place it in the filter used in step 7 and wash all the TNT with 250 ml of water.**
**12) Place 200g of 70% sulphuric acid in a beaker, add the collected TNT and stir for 1 hour.**
**13) Filter out TNT and wash with 250 ml of cold water. The methylene chloride that is collected in the receiving flask can be reused.**

## Styphnic Acid

**Materials:**

**55g resorcinol**
**210 ml 16% nitric acid**
**75g sodium nitrite**
**200 ml 60% nitric acid**

**Procedure:**

**1) Add 55g of resorcinol, 210 ml of 16% nitric acid, and 474g of crushed ice to a beaker.**
**2) In a separate beaker, add 75g of sodium nitrite and 457 ml of water.**
**3) When the resorcinol has fully dissolved in the first solution, and the sodium nitrite has dissolved in the second solution, add the sodium nitrite solution to the resorcinol/nitric acid solution over a 20 minute time period while vigorously stirring.**
**4) Add 200 ml of 60% nitric acid to a separate beaker and heat it to 60 degrees Celsius.**
**5) While vigorously stirring and keeping the temperature of the mixture at 60 degrees Celsius, over a 1 hour time period add the resorcinol/nitric acid/sodium nitrite mixture to the 60% nitric acid.**
**6) Raise the temperature of the mixture to 82 degrees Celsius and hold it there for 15 minutes.**

**7) While stirring, slowly raise the temperature of the mixture to 97 degrees Celsius and hold it there for 45 minutes.**
**8) Remove the beaker from the heat source and allow to cool to room temperature.**
**9) Filter the styphnic acid out of the solution and wash with 500 ml of cold water and let dry.**

## RDX

**Materials**

**20g hexamine**
**220g 99% nitric acid**
**14g 70% nitric acid**
**2 g sodium nitrite.**

**Procedure:**

**1) Add 220g of 90% nitric acid to a beaker.**
**2) Cool the beaker to 10 degrees Celsius by using a cold water bath.**
**3) Slowly add 20g of hexamine to the 99% nitric acid while maintaining the temperature at 10 degrees Celsius.**
**4) Let the temperature of the mixture to rise to 20 degrees Celsius and maintain this temperature for 20 minutes while constantly stirring.**
**5) Place 14g of 70% nitric acid and 2g of sodium nitrite into a separate beaker and heat to 70 degrees Celsius.**
**6) While stirring and maintaining the temperature of the 70% nitric acid at 70 degrees Celsius, slowly add the mixture prepared in step 3.**
**7) Continue maintaining the temperate at 70 degrees Celsius for 20 minutes.**
**8) Remove the beaker from the heat source and allow it to cool to room temperature.**
**9) Place the beaker in an ice bath and cool it to 5 degrees Celsius.**
**10) Add the contents of the beaker to 500 ml of water and filter off the RDX precipitate.**
**11) Wash the precipitate with 200 ml of water and let dry.**

## ANFO-AL

**Materials:**

**103.4g guar gum**
**240.8g fine aluminum powder with polytetrafluoroethylene coating**
**4.74kg ammonium nitrate**

**Procedure:**

**1) Add 103.4g of guar gum and 240.8g of fine aluminum powder with polytetrafluoroethylene coating to a zip lock bag.**
**2) Shake and mix the guar gum/aluminum powder in the bag for 30 minutes.**
**3) Add 258 ml of cold water to a plastic bucket containing 4.74kg of ammonium nitrate.**
**4) Mix and blend the water and ammonium nitrate for 30 minutes.**
**5) Add the guar gum/aluminum powder to the plastic bucket.**
**6) Add 1L of cold water to the plastic bucket while mixing vigorously.**
**7) Mix and blend the contents of the bucket for 30 minutes.**

## ANSOY

**Materials:**

**1.87kg ammonium nitrate**
**130g raw soybean oil**

**1) In a plastic bucket, add 130g of raw soybean oil to 1.87kg of ammonium nitrate.**
**2) Mix and blend this mixture for 30 minutes and place in a zip lock bag.**
**3) Let the bag sit for 5 days before use.**

## DPT

**Materials:**

**10.5g nitrourea**
**60 ml 37% formaldehyde solution**
**100 ml 5% sodium hydroxide solution**
**28-30% ammonia solution**

**Procedure:**

**1) Add 10.5g of nitrourea to 60 ml of 37% formaldehyde solution to a beaker while stirring.**
**2) Heat the mixture to 45 degrees Celsius while stirring until all the nitrourea has dissolved.**
**3) As soon as it dissolves, remove the beaker from the heat source and allow the solution to cool to room temperature.**
**4) Rapidly add 100 ml of 5% sodium hydroxide solution while stirring the formaldehyde/nitrourea solution.**
**5) Stir the solution for one hour**
**6) Heat the solution to 65 degrees Celsius and maintain it there for 1 hour while stirring.**
**7) Remove the beaker from the heat source and allow it to cool to room temperature**
**8) Add 100 ml of 28-30% ammonia solution to the beaker.**
**9) Filter the liquid to collect the precipitate. Leave the precipitate in the filter and set it aside.**
**10) Add another 50 ml of 28-30% ammonia to the beaker**
**11) Filter off the precipitate using the same filter used in step 9.**
**12) Wash the precipitate with 500 ml of cold water and let dry.**

## Nitroglycerin 1

**Materials:**

**100 ml 70% nitric acid**
**200 ml 70% sulphuric acid**
**50ml glycerin**
**Sodium chloride**
**Sodium bicarbonate**

**Procedure:**

**1) In a round bottom flask containing 100 ml of 70% nitric acid, slowly add 200 ml of 70% sulphuric acid while gently swirling the flask.**
**2) Cool the beaker to 0 degrees Celsius in an ice bath .**
**3) While constantly swirling the flask, add 50 ml of glycerin in small portions. Don't let the temperature rise above 15 degrees Celsius. The addition of the glycerin should take 25 – 30 minutes.**
**4) After adding all of the glycerin swirl the flask for 5 minutes, then remove the flask from the ice bath and allow the temperature of the solution to rise to room temperature. Swirl the flask occasionally.**
**5) Keep the temperature of the solution at room temperature for 10 minutes while constantly swirling the flask.**
**6) Pour the contents of the flask into a beaker containing 1L of water.**
**7) Pour the contents of the beaker in a seperatory funnel and extract the bottom layer or liquid. This is nitroglycerin.**

**8) Add the nitroglycerin to a round bottom flask containing 350 ml of cold distilled water. Swirl the liquid in the flask for 5 minutes.**
**9) Let the flask sit for 2 hours while swirling occasionally.**
**10) Again, extract the nitroglycerin layer using a seperatory funnel.**
**11) Pour the nitroglycerin into a round bottom flask containing 500 ml of 20% sodium bicarbonate/distilled water solution. Swirl the flask for 5 minutes.**
**12) Let the flask sit for 12 hours with occasional swirling of the flask.**
**13) Add 500 ml of distilled water to a beaker and heat it to 65 degrees Celsius.**
**14) Keep adding sodium chloride to the warm water while stirring until no more will dissolve. Filter the solution and discard the undissolved salt caught in the filter.**
**15) Extract the nitroglycerine out of the sodium bicarbonate solution.**
**16) Add the nitroglycerin and the sodium chloride solution prepared in step 13 and swirl the flask for 5 minutes**
**17) Let the flask sit for 12 hours with occasional swirling.**
**18) After 12 hours, extract the nitroglycerin and pour it onto a shallow dish to allow any water to evaporate.**

## Nitroglycerin 2

**Materials:**

**100 ml 99% nitric acid**
**200 ml 98% sulphuric acid**
**50ml glycerin**
**Sodium chloride**
**Sodium bicarbonate**

**Procedure:**

**1) Place a round bottom flask containing 100 ml of 99% nitric acid in an ice bath and cool to 0 degrees Celsius.**
**2) Slowly add 50 ml of glycerin while swirling the flask while keeping the temperate below 15 degrees Celsius. The addition should take 15 minutes.**
**3) After adding all of the glycerin, swirl the flask for 10 minutes**
**4) While gently swirling the flask containing the nitric acid/glycerin, slowly add 200 ml of 98% sulphuric acid while keeping the temperature below 15 degrees Celsius. The addition should take 10 - 15 minutes.**
**5) After all the sulphuric acid has been added continue swirling the flask for 5 minutes and then remove it from the ice bath.**
**6) Allow the temperature of the solution to rise to room temperature while occasionally swirling the flask.**
**7) Keep the temperature of the solution at room temperature for 10 minutes while constantly swirling the flask.**
**8) Pour the contents of the flask into a beaker containing 1L of water.**
**9) Pour the contents of the beaker in a seperatory funnel and extract the bottom layer or liquid. This is nitroglycerin.**
**10) Add the nitroglycerin to a round bottom flask containing 350 ml of cold distilled water. Swirl the liquid in the flask for 5 minutes.**
**11) Let the flask sit for 2 hours while swirling occasionally.**
**12) Again, extract the nitroglycerin layer using a seperatory funnel.**
**13) Pour the nitroglycerin into a round bottom flask containing 500 ml of 20% sodium bicarbonate/distilled water solution. Swirl the flask for 5 minutes.**
**14) Let the flask sit for 12 hours with occasional swirling of the flask.**
**15) Add 500 ml of distilled water to a beaker and heat it to 65 degrees Celsius.**
**16) Keep adding sodium chloride to the warm water while stirring until no more will dissolve. Filter the solution and discard the undissolved salt caught in the filter.**
**17) Extract the nitroglycerine out of the sodium bicarbonate solution.**
**18) Add the nitroglycerin and the sodium chloride solution prepared in step 13 and swirl the flask for 5 minutes**
**19) Let the flask sit for 12 hours with occasional swirling.**
**20) After 12 hours, extract the nitroglycerin and pour it onto a shallow dish to allow any water to evaporate.**

## Nitroglycerine 3

**Materials:**

**392g 98% sulphuric acid**
**160g ammonium nitrate**
**92g glycerin**
**Sodium chloride**
**Sodium bicarbonate**

**Procedure:**

**1) Place a flask containing 392g of 98% sulphuric acid in an ice bath.**
**2) While swirling the flask, slowly add 200g of ammonium nitrate to the flask and swirl the flask until all of the ammonium nitrate has dissolved**
**3) Allow the solution to cool to 0 degrees Celsius.**
**4) While swirling the flask, slowly add the glycerin in 5 ml portions while keeping the temperature of the solution below 15 degrees Celsius.**
**5) After adding all of the glycerin continue swirling the flask for 5 minutes then remove the beaker from the ice bath.**
**6) Allow the temperature of the solution to rise to room temperate while occasionally swirling the flask.**
**7) Keep the temperature of the solution at room temperature for 10 minutes while constantly swirling the flask**
**8) Pour the contents of the flask into a beaker containing 1L of water.**
**9) Pour the contents of the beaker in a seperatory funnel and extract the bottom layer or liquid. This is nitroglycerin.**
**10) Add the nitroglycerin to a round bottom flask containing 350 ml of cold distilled water. Swirl the liquid in the flask for 5 minutes.**
**11) Let the flask sit for 2 hours while swirling occasionally.**
**12) Again, extract the nitroglycerin layer using a seperatory funnel.**
**13) Pour the nitroglycerin into a round bottom flask containing 500 ml of 20% sodium bicarbonate/distilled water solution. Swirl the flask for 5 minutes.**
**14) Let the flask sit for 12 hours with occasional swirling of the flask.**
**15) Add 500 ml of distilled water to a beaker and heat it to 65 degrees Celsius.**
**16) Keep adding sodium chloride to the warm water while stirring until no more will dissolve. Filter the solution and discard the undissolved salt caught in the filter.**
**17) Extract the nitroglycerine out of the sodium bicarbonate solution.**
**18) Add the nitroglycerin and the sodium chloride solution prepared in step 13 and swirl the flask for 5 minutes**
**19) Let the flask sit for 12 hours with occasional swirling.**
**20) After 12 hours, extract the nitroglycerin and pour it onto a shallow dish to allow any water to evaporate.**

## Hexamethylenetetramine Dinitrate

**Materials:**

**50g of hexamine**
**287mL of 34% hydrochloric acid**
**100g of ammonium nitrate**

**Procedure:**

**1) Add 287 ml of 34% hydrochloric acid to a beaker.**
**2) Add 100g of ammonium nitrate to the beaker and stir until it all dissolves.**
**3) Cool the beaker to 0 degrees Celsius in an ice bath.**
**4) While vigorously stirring, add 50g of finely powdered hexamine and stir until it all dissolves. After it dissolves, a white precipitate should form almost immediately.**
**5) Quickly filter out the precipitate and let it dry.**