

KITCHEN IMPROVISED EXPLOSIVES

Welcome to the book of Kitchen Improvised Explosives. I spent a lot of time on this and hope you have fun reading it. WARNING! the techniques described here are very dangerous, and the manufacture of explosives is illegal and classified as a felony. This is for informational purposes only, furthermore, for anyone who does not know proper laboratory procedures and safety these steps can be dangerous/fatal. I cannot accept responsibility for the use of this information. One last thing, due to the nature of these explosive compounds, obtain a college level chemistry book and lab procedure handbook for your further reading pleasure. L8r

Gordo

COMPARISON OF DETONATION VELOCITIES

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R.D.X. MANUFACTURE

Cyclotrimethylenetrinitramine or cyclonite is manufactured in bulk by the nitration of hexamethylenetetramine (methenamine, hexamine) with strong red 100% nitric acid. The hardest part of this reaction is obtaining this red nitric acid. It will most likely have to be made. More on this later. The hexamine or methenamine can usually be bought in bulk quantities or hexamine fuel bars for camp stoves can be used but they end up being very expensive. To use the fuel bars, they need to be powdered before hand. The hexamine can also be made with common ammonia water (5%) and the commonly available 37% formaldehyde solution. To make this component, place 400 g of clear ammonia water in a shallow pyrex dish. To this add 54 g of the formaldehyde solution to the ammonia water. Allow this to evaporate and when the crystals are all that remain in the pan, place the pan in the oven on the lowest heat that the oven has. This should be done only for a moment or so to drive off any remaining water. These crystals are scraped up and placed in an airtight jar to store them until they are used.

To make the red nitric acid you will need to buy a retort with a ground glass stopper. In the retort place 32 g sulfuric acid (98-100%) and to this add 68 g of potassium nitrate or 58 g of sodium nitrate. Gently heating this retort will generate a red gas called nitrogen trioxide. This gas is highly poisonous and this step as with all other steps should be done with good ventilation. This nitric acid that is formed will collect in the neck of the retort and form droplets that will run down the inside of the neck of the retort and should be caught in a beaker cooled by being surrounded by ice water. This should be heated until no more collects in the neck of the retort and the nitric acid quits dripping out of the neck into the beaker. This acid should be stored until enough acid is generated to produce the required size batch which is determined by the person producing the explosive. Of course the batch can be bigger or smaller but the same ratios

should be maintained.

To make the R.D.X. place 550 g of the nitric acid produced by the above procedure in a 1000 ml beaker in a salted ice bath. 50 g of hexamine (methenamine) is added in small portions making sure that the temperature of the acid does not go above 30 degrees C. This temperature can be monitored by placing a thermometer directly in the acid mixture. During this procedure a vigorous stirring should be maintained. If the temperature approaches 30 degrees. immediately stop the addition of the hexamine until the temperature drops to an acceptable level. After the addition is complete, continue the stirring and allow the temperature to drop to 0 degrees C and allow it to stay there for 20 minutes continuing the vigorous stirring. After the 20 minutes are up, pour this acid-hexamine mixture into 1000 ml of finely crushed ice and water. Crystals should form and are filtered out of the liquid.

The crystals that are filtered out are R.D.X. and will need to have all traces of the acid removed. To remove this trace of acid, first wash these crystals by putting them in ice water, shaking, and refiltering. These crystals are then placed in a little boiling water and filtered. Place them in some warm water and check the acidity for the resultant suspension with litmus paper. You want them to read between 6 and 7 Ph scale. If there is still acid in these crystals, reboil them in fresh water until the acid is removed and the litmus show them to be between 6 and 7 (the closer to 7 the better). To be safe, these crystals should be stored water wet until ready for use. These crystals are a very high explosive and should be treated as such. This explosive is much more powerful than T.N.T. To use, they will need to be dried for some manufacture processes which are described later. To dry these crystals, place them in a pan, spread them out, and allow the water to evaporate off of them until they are completely dry.

This explosive will detonate in this dry form when pressed into a mold to a density of 1.55 g/cc at a velocity of 8550 m/sec.

Try mixing:

R.D.X.	78.5%
Nitroglycerin or Nitroglycol	17.5%
Petroleum Jelly (vaseline)	4%

or:

R.D.X.	80%
Wax (1/2 wax, 1/2 wheel bearing grease)	20%

WARNING! Skin contact should be avoided with the final products.

This explosive is a Potassium chlorate explosive. This explosive and explosives of similar composition were used in WWI as the main explosive filler in grenades, land mines, and mortar rounds used by French, German and some other forces involved in that conflict. These explosives are relatively safe to manufacture. One should strive to make sure these explosives are free of sulfur, sulfides, and picric acid. The presence of these compounds result in mixtures that are or can become highly sensitive and possibly decompose explosively while in storage. The manufacture of this explosive from bleach is given just as an expedient method. This method of manufacturing potassium chlorate is not economical due to the amount of energy used to boil the solution and cause the 'dissociation' reaction to take place. This procedure does work and yields a relatively pure and a sulfur, sulfide free product. These explosives are very cap sensitive and require only a #3 cap for instigating detonation. To manufacture potassium chlorate from bleach (5.25% sodium hypochlorite solution) obtain a heat source (hot plate, stove etc.), a battery hydrometer, a large pyrex or enameled steel container (to weigh chemicals), and some potassium chloride (sold as a salt substitute). Take one gallon of bleach and place it in the container and begin heating it. While this solution heats, weigh out 63 g potassium chloride and add this to the bleach being heated. Bring this solution to a boil and boil until when checked with a hydrometer the reading is 1.3 (if a battery hydrometer is used it should read full charge).

When the reading is 1.3 take the solution and let it cool in the refrigerator until it is between room temperature and 0 degrees C. Filter out the crystals that have formed and save them. Boil this solution again and cool as before. Filter and save the crystals. Take these crystals that have been saved and mix them with distilled water in the following proportions: 56 g per 100 ml distilled water. Heat this solution until it boils and allow it to cool. Filter the solution and save the crystals that form upon cooling. This process of purification is called fractional crystallization. These crystals should be relatively pure potassium chlorate.

Powder these to the consistency of face powder (400 mesh) and heat gently to drive off all moisture. Melt five parts vaseline and five parts wax. Dissolve this in white gasoline (camp stove gasoline) and pour this liquid on 90 parts potassium chlorate (the crystals from the above operation) in a plastic bowl. Knead this liquid into the potassium chlorate until intimately mixed. Allow all the gasoline to evaporate. Place this explosive in a cool dry place. Avoid friction and sulfur/sulfides/phosphorous compounds. This explosive is best molded to the desired shape and density (1.3 g/cc) and dipped in wax to water proof. These block type charges guarantee the highest detonation velocity. This explosive is really not suited to use in shaped charge applications due to it's relatively low detonation velocity. It is comparable to 40% ammonia dynamite and can be considered the same for the sake of charge computation. If the potassium chlorate is bought and not made, it is put into the manufacture process in the powdering stages preceding the addition of the wax-vaseline mixture. This explosive is powerful and hair raising. The addition of 2-3% aluminum powder increases it's blast effect. Detonation velocity 3300 m/sec.

PLASTIQUE EXPLOSIVE FROM SWIMMING POOL
CHLORINATING COMPOUND (H.T.H.)

This explosive is a chlorate explosive from bleach. This method of production of potassium or sodium chlorate is easier and yields a more pure product than does the plastique explosive from bleach process. In this reaction the H.T.H. (calcium hypo-chlorate CaClO) is mixed with water and heated with either sodium chlorate (table salt, rock salt) or potassium chloride (salt substitute). The latter of these salts is the salt of choice due to the easy crystallization of the potassium chlorate. This mixture will need to be boiled to ensure complete reaction of the ingredients.

Obtain some H.T.H. swimming pool chlorination compound or equivalent (usually 65% calcium hypochlorite). As with the bleach is also a dissociation reaction. In a large pyrex glass or enameled steel container place 1200 g H.T.H. and 220 g potassium chloride or 159 g sodium chloride. Add enough boiling water to dissolve the powder and boil this solution. A chalky substance (calcium chloride) will be formed. When the formation of this chalky substance is no longer formed the solution is filtered while boiling hot. If potassium chloride was used, potassium chlorate will be formed. This potassium chlorate will drop out or crystallize as the clear liquid left after filtering cools. These crystals are filtered out when the solution reaches room temperature. If the sodium chloride salt was used this clear filtrate (clear liquid after filtration) will need to have all water evaporated. This will leave crystals which should be saved.

These crystals should be heated in a slightly warm oven in a pyrex dish to drive off all traces of water (40-75 degree C). These crystals are ground to a very fine powder (400 mesh).

If the sodium chloride salt is used in the initial step the crystallization is much more time consuming. The potassium chloride is the salt to use as the resulting product will crystallize out of the solution as it cools. The powdered and completely dry chlorate crystals are kneaded together with vaseline in a plastique bowl. ALL CHLORATE BASED EXPLOSIVES ARE SENSITIVE TO FRICTION, AND SHOCK, AND THESE BETTER BE AVOIDED. If sodium chloride is used in this explosive, it will have a tendency to cake and has a slightly lower detonation velocity. This explosive is composed of the following:

potassium or sodium chlorate	90%
vaseline	10%

The detonation velocity can be raised to a slight extent by the addition of 2-3% aluminum powder substituted for 2-3% of the vaseline. The addition of this aluminum will give this explosive a bright flash if set off at night which will ruin night vision for a short while. The detonation velocity of this explosive is

approximately 3200 m/sec for the potassium salt and 2900 m/sec for the sodium salt based explosive.

PLASTIQUE EXPLOSIVE FROM TABLE SALT

This explosive is perhaps the most easily manufactured of the chlorate based explosives. Sodium chlorate is the product because rock salt is the major starting ingredient. This process would work equally as well if potassium chloride were used instead of the sodium chloride (rock salt). The sodium chlorate is the salt I will cover due to the relatively simple acquisition of the main ingredient. The resulting explosive made from this process would serve as a good cheap blasting explosive and will compare favorably with 30% straight dynamite in power and blasting efficiency. This explosive can be considered the same as 30% straight dynamite in all charge computation. These explosives and similar compositions were used to some extent in WWI by European forces engaged in that conflict. It was used as a grenade and land mine filler. It's only drawback is it's hygroscopic nature (tendency to absorb atmospheric moisture). These explosives also have a relatively critical loading density. They should be used at a loading density of 1.3 g/cc. If this density is not maintained, unreliable or incomplete detonation will take place. These short comings are easily over come by coating the finished explosive products with molten wax and loading this explosive to the proper density. This explosive is not good for shaped charge use due to it's low detonation rate (2900 m/sec). The major part of the manufacture of this explosive from rock salt is the cell reaction where D.C. current changes the sodium chloride to chlorate by adding oxygen by electrolysis of a saturated brine solution. The reaction takes place as follows:



In this reaction the sodium chloride (NaCl) takes the waters' oxygen and releases its hydrogen as a gas. This explosive gas must be vented away as sparks or open flame may very well cause a tremendous explosion. This type of process or reaction is called a 'cell' reaction. The cell should be constructed of concrete or stainless steel. I won't give any definite sizes on the cell's

construction because the size is relative to the power source. This cell would have to be large enough to allow the brine to circulate throughout the cell to insure as uniform a temperature as possible.

The speed of the reaction depends on two variables. Current density is a very important factor in the speed of the reaction. The advantages of high current densities are a faster and more efficient reaction. The disadvantages are that cooling is needed to carry away excess heat and the more powerful power sources are very expensive. For small operations, a battery charger can be used (automotive). This is the example I will use to explain the cell's setup and operation (10 amp 12 volt). The current density at the anode (+) and cathode (-) are critical. This density should be 50 amps per square foot at the cathode and 30 amps per square foot at the anode. For a 10 amp battery charger power source this would figure out to be 5 5/16" by 5 5/16" for the cathode. The anode would be 6 15/16" by 6 5/16". The anode is made of graphite or pressed charcoal and the cathode is made of steel plate (1/4"). These would need to be spaced relatively close together. This spacing is done with some type of nonconducting material such as glass rods. This spacing can be used to control the temperature to some extent. The closer together they are, the higher the temperature. These can be placed either horizontally or vertically although vertical placement of the anode and cathode would probably be the ideal set up as it would allow the hydrogen to escape more readily. The anode would be placed at the bottom if placed horizontally in the cell so that the chlorine released could readily mix with the sodium hydroxide formed at the cathode above it. As the current passes through, the cell chlorine is released at the anode and mixes with the sodium hydroxide formed at the cathode. Hydrogen is released at the cathode which should bubble out of the brine. This gas is explosive when mixed with air and proper precautions should be taken. PROPER VENTILATION MUST BE USED WITH THIS OPERATION TO AVOID EXPLOSION.

Temperature control is left up to the builder of the cell. The temperature of the cell should be maintained at 56 degrees C during the reaction. This can be done by the circulation of water through the cell in pipes. But the easiest way would be to get an adjustable thermostatic switch adjusted to shut the power source off until the cell cools off. This temperature range could be from 59 degree shut off to a 53 degree start up. An hour meter would be used on the power source to measure the amount of time the current passes through the cell. If the water cooling coil design appeals to the manufacturer and an easily obtained cheap source of cool or cold water is available, this would be the quickest design to use. Again a thermostatic type arrangement would be used to meter the cold cooling water through the cell. The cooling coils would best be made of stainless steel to overcome the corrosiveness of the salts although this is not entirely necessary. A thermostatic valve would be set to open when the brine electrolyte was heated above approximately 58 degrees C. Again this would be the best and most efficient method and the waste heat could be used relatively easily.

To run the cell, after the cell has been constructed and the concrete has been sealed and has set and cured for several weeks, is very simple. First to seal the concrete I suggest Cactus Paint's C P 200 series, two component epoxy paint, or an equivalent product. To fill the cell place 454 G sodium chloride in the cell (rock salt is excellent here). Place four liters of distilled water into the cell with the salt. The liquid should cover the

anode and the cathode completely with room to spare. Remember that some of the water will be used in the reaction. Thirty three grams of muriatic acid (hydrochloric), which should be available at swimming pool supply stores or hardware stores, is then added to the liquid in the cell. Be careful when handling ANY acid!!! Then seven grams of sodium dichromate and nine grams of barium chloride is added. The cell is then ready to run if the plates are connected to their respective cables. These cables are best made of stainless steel (the most corrosion resistant available). The power supply is then hooked up and the cell is in operation. The power is best hooked up remotely to lessen the chance of explosion. Any time the cell runs it will be making hydrogen gas. THIS GAS IS EXPLOSIVE WHEN MIXED WITH AIR AND ALL SPARKS, FLAME, AND ANY SOURCE OF IGNITION SHOULD BE KEPT WELL AWAY FROM THE CELL AND THIS CELL SHOULD ONLY BE RUN WITH VERY GOOD VENTILATION. The steel plate cathode should be hooked to the negative side of the power source and the anode hooked to the positive side. Again these are hooked to the power supply via stainless steel cables. This cell is then run at the proper temperature until 1800 amp hours pass through (amount per pound of sodium chloride) the electrolyte. The liquid in the cell is then removed and placed in an enameled steel container and boiled until crystals form on liquid. It is cooled and filtered, the crystals collected being saved. This is done twice and the remaining liquid saved for the next cell run. The process will become easier as each run is made. It is a good idea to keep records on yields and varying methods to find out exactly the best process and yield. To purify these crystals place 200 grams in 100 ml distilled water. Boil the solution until crystals are seen on the surface. Let cool and filter as before. Save this liquid for the next cell run. These purified crystals are placed in a pyrex dish and placed in the oven at 50 degrees C for two hours to drive off all remaining water.

The explosive is ready to be made. The crystals or sodium chlorate is ground to a powder of face powder consistency. Ninety grams of this sodium chlorate are kneaded with 10 grams of vaseline until a uniform mixture is obtained. This explosive is sensitive to shock, friction, and heat. These should be avoided at all cost. This explosive works best at a loading density of 1.3-1.4 G/cc. If this explosive is not used at this density the detonation velocity will be low and detonation will be incomplete. To load to a known density measure the volume of the container in which the explosive is to be loaded. This can be done by pouring water out of a graduated cylinder until the container is filled. The total number of ml will equal the cc's of the container. Multiply this number times 1.3 and load that much explosive (in grams of course) into the container after the container has been dried of all water. This procedure should be used with all chlorate explosives (plastique explosive from bleach, plastique explosive from H.T.H.). This is a good explosive that is cheap and relatively powerful.

PLASTIQUE EXPLOSIVE FROM ASPIRIN

This explosive is a phenol derivative. It is toxic and explosive compounds made from picric acid are poisonous if inhaled, ingested, or handled and absorbed through the skin. The toxicity of this explosive restricts its use due to the fact that over exposure in most cases causes liver and kidney failure and sometimes death if immediate treatment is not obtained.

This explosive is a cousin to T.N.T. but is more powerful than its cousin. It is the first explosive used militarily and was adopted in 1888 as an artillery shell filler. Originally this explosive was derived from coal tar but thanks to modern chemistry you can make this one easily in approximately 3 hours from acetylsalicylic acid (aspirin purified).

This procedure involves dissolving the acetylsalicylic acid in warm sulfuric acid and adding sodium or potassium nitrate which nitrates the purified aspirin and the whole mixture drowned in water and filtered to obtain the final product. This explosive is called trinitrophenol. Care should be taken to ensure that this explosive is stored in glass containers. Picric acid will form dangerous salts when allowed to contact all metals except tin and aluminum. These salts are primary explosives and are super sensitive. They also will cause the detonation of the picric acid.

To make picric acid obtain some aspirin. The cheaper brands work best and buffered brands should be avoided. Powder the tablets to a fine consistency. To extract the acetylsalicylic acid from this powder, place this powder in warm methyl alcohol and stir vigorously. Not all of the powder will dissolve. Filter this powder out of the alcohol. Again, wash this powder that was filtered out of the alcohol with more alcohol but with a lesser amount than the extraction. Again filter the remaining powder out of the alcohol. Combine the now clear alcohol and allow it to evaporate in a shallow pyrex dish. When the alcohol has evaporated there will be a surprising amount of crystals in the bottom of the pyrex dish.

Take forty grams of these purified acetylsalicylic acid crystals and dissolve them in 150 ml of sulfuric acid (98%, specific gravity 1.8) and heat to dissolve all the crystals. This heating can be done in a common electric frying pan with the thermostat set on 150 degrees F and filled with a good cooking oil. When all the crystals have dissolved in the sulfuric acid, take the beaker that you've done this dissolving in (600 ml) out of the oil bath.

This next step will need to be done with a very good ventilation system (it is a good idea to do any procedure in this book with good ventilation or outside). Slowly start adding 58 g of sodium nitrate or 77 g potassium nitrate to the acid mixture in the beaker very slowly in small portions with vigorous stirring. A red gas (nitrogen trioxide) will be formed and this should be

avoided. (Caution: I repeat, this red gas nitrogen trioxide should be avoided. Very small amounts of this gas are highly poisonous. Avoid breathing vapors if you value your life!). The mixture is likely to foam up and the addition should be stopped until the foaming goes down to prevent the overflow of the acid mixture in the beaker.

When the sodium or potassium nitrate has been added, the mixture is allowed to cool somewhat (30-40 degrees C). The solution should then be dumped slowly into twice it's volume of crushed ice and water. Brilliant yellow crystals will form in the water. These should be filtered out and placed in 200 ml of boiling distilled water. This water is allowed to cool and the crystals are then filtered out of the water. These crystals are a very, very, pure trinitrophenol. These crystals are then placed in a pyrex dish and placed in an oil bath and heated to 80 degrees C and held there for 2 hours. This temperature is best maintained and checked with a thermometer. The crystals are then powdered in small quantities to a face powder consistency. These powdered crystals are then mixed with 10% by weight wax and 5% baseline which are heated to melting temperature and poured onto the crystals. The mixing is best done by kneading together with gloved hands. This explosive should have a useful plasticity range of 0-40 degrees C. The detonation velocity should be around 7000 m/sec. It is toxic to handle but simply made from common ingredients and is suitable for most demolition work requiring a moderately high detonation velocity. It is very suitable for shaped charges and some steel cutting charges. It is not as good an explosive as is C-4 or other R.D.X. based explosives but it is much easier to make. Again this explosive is VERY toxic and should be treated with great care. AVOID HANDLING BARE HANDED, BREATHING DUST AND FUMES, AVOID ANY CHANCE OF INGESTION. AFTER UTENSILS ARE USED FOR THE MANUFACTURE OF THIS EXPLOSIVE RETIRE THEM FROM THE KITCHEN AS THE CHANCE OF POISONING IS NOT WORTH THE RISK. THIS EXPLOSIVE, IF MANUFACTURED AS ABOVE, SHOULD BE SAFE IN STORAGE BUT WITH ANY HOMEMADE EXPLOSIVE, STORAGE IS NOT RECOMMENDED AND EXPLOSIVE SHOULD BE MADE UP AS NEEDED. AVOID CONTACT WITH ALL METALS EXCEPT ALUMINUM AND TIN!!!

NITRO-GELATIN PLASTIQUE EXPLOSIVE

This explosive would be a good explosive for home type manufacture. It is very powerful and is comparatively stable. It's power can be compared favorably with the R.D.X. based plastique explosives. The major drawbacks are the problems with headaches in use and it's tendency to become insensitive to a blasting cap with age. It is a nitroglycerin based explosive and therefore the manufacturer would need to be familiar with the handling of nitroglycerin and know the safety procedures associated with it's handling. All of the explosives' bad points can be overcome through planning ahead and careful handling of it's explosive components. Gloves should be worn at all times during

this explosive's manufacture and use. The nitro headache can be avoided by avoiding skin contact and avoidance of the gases formed when the explosive is detonated. This explosive would need to be made up prior to it's use to ensure cap reliability and a high detonation rate. Nitroglycerin is sensitive to shock, flame, and impurities. Any of these can and possibly would cause the premature detonation of the nitroglycerin. This is something to remember as the detonation of nitroglycerin is very impressive. Nitroglycerin, discovered in 1846, is still the most powerful explosive available.

This explosive is nitroglycerin made plastic by the addition of 7-9% nitrocellulose. It is possible to make this nitrocellulose but much more practical to buy it. It is available as IMR smokeless powder as sold by Dupont. It should be easily obtained at any area sporting goods store.

To make this explosive take 8% IMR smokeless powder and mix it with a 50/50 ether-ethyl alcohol and mix until a uniform mixture is obtained. This should be a gummy putty like substance which is properly called a collidon. To this collidon is added 92%, by weight, nitroglycerin. This is very, very carefully mixed by kneading with gloved hands. Nitroglycerin and nitroglycol manufacture is covered later. A uniform mixture should be obtained by this kneading. THERE IS DANGER INVOLVED IN THIS STEP AND THIS SHOULD NOT BE ATTEMPTED UNLESS THE MANUFACTURER IS WILLING TO RISK HIS LIFE. This nitro-gelatin is then ready for use. It is not recommended that this explosive be kept for any length of time. It should be used immediately. If this is impossible the explosive can be stored with a relative degree of safety if the temperature is kept in the 0-10 degree C range. This explosive is a good choice if the R.D.X. based plastique's cannot be made. The plastic nature of this explosive will deteriorate with age but can be made pliable again with the addition of a small percentage of 50/50 ether-ethyl alcohol. The detonation velocity of this explosive should be around 7700-7900 m/sec. This is a good explosive for underwater or U.D.T. type demolition work.

(diethelene glycol)

This explosive is almost the same as the nitro-gelatin formula except it is supple and pliable between -10 and -20 degrees C. Antifreeze is easier to obtain than glycerin and is usually cheaper. It needs to be freed of water before the manufacture and this can be done by treating it with calcium chloride to the antifreeze and checking with a hydrometer and continue to add calcium chloride until the proper reading is obtained. The antifreeze is then filtered to remove the calcium chloride from the liquid. This explosive is superior to the nitro-gelatin formula in that it is easier to implement the IMR smokeless powder into the explosive and that the 50/50 ether ethyl alcohol can be done away with. It is superior in that the formation of the precipitate is done very rapidly by the nitroethelene glycol. It's detonation properties are practically the same as the nitro-gelatin formula. Like the nitro-gelatin formula, it is highly flammable and if caught on fire the chances are good that the flame will progress to detonation. In this explosive, the addition of 1% sodium carbonate is a good idea to reduce the chance of residual acid being present in the final explosive. The following is a slightly different formula than the nitro-gelatin one:

Nitro-glycol	75%
Guncotton (IMR smokeless)	6%
Potassium nitrate	14%
Flour (as used in baking)	5%

In this process the 50/50 step is omitted. Mix the potassium nitrate with the nitroglycol. Remember that this nitroglycol is just as sensitive to shock as is nitroglycerin. The next step is to mix in the flour and sodium carbonate. Mix these by kneading with gloved hands until the mixture is uniform. This kneading should be done gently and slowly. The mixture should be uniform when the IMR smokeless powder is added. Again this is kneaded to uniformity. Use this explosive as soon as possible. If it must be stored, store in a cool dry place (0-10 degrees C). This explosive should detonate at 7600-7800 m/sec. These last two explosives are very powerful and should be sensitive to a #6 blasting cap or equivalent. These explosives are dangerous and should not be made unless the manufacturer has had experience with this type compound. The foolish and ignorant may as well forget these explosives as they won't live to get to use them. Don't get me wrong, these explosives have been manufactured for years with an amazing record for safety. Millions of tons of nitroglycerin have been made and used to manufacture dynamite and explosives of this nature with very few mishaps. Nitroglycerin and nitroglycol will kill and their main victims are the stupid and foolhardy. This explosive compound is not to be taken lightly. If there are any doubts, DON'T!

NITROGLYCERIN AND NITROGLYCOL MANUFACTURE

Glycerin and ethylene glycol are related chemically to one another and are grouped as an alcohol. Both of these oily substances can be nitrated to form a trinitro form. These trinitro forms are both unstable and will explode with tremendous violence and power. Impurities in this form of the substance will also cause the decomposition of the oil. Glycerin is used for soap manufacture and should be easily bought without question. Ethylene glycol is sold as common antifreeze and should be easily acquired. Ethylene glycol renders a better product and would be the item of choice plus the manufacture of plastique explosives from this oily explosive is much easier than from the glycerin nitro form. If ethylene glycol is used it is easier to buy the anhydrous form than to desiccate the water from the antifreeze version of this chemical. The glycerin is also best if bought in it's anhydrous form. The use of the anhydrous form (water free) prevents the watering down of the nitration acids and thus gives a much higher yield of the final product.

This nitration is achieved by the action of an acid mixture on the glycerin or glycol. This acid is composed of the following percentages:

Nitric acid (70%)	30%
Sulfuric acid (98%)	70%
or	
Nitric acid (100%)	38%
Sulfuric acid (98%)	62%

Of course this is by weight as all the percentages I have given. The first acid mixture won't give as good a yield of nitro compound as the second acid mixture. The first nitric acid strength is the only one that is readily available and can be bought readily. The 100% nitric acid is however made readily and is really worth the extra trouble because the yield of nitroglycerin or glycol is so much higher. The actual nitration should be carried out in a glass (pyrex) or enameled steel container. The acids are poured into the container. First the sulfuric and then the nitric very slowly. A great deal of heat is generated by this acid mixing. This container should have been previously placed in a salted ice bath. A thermometer is placed in the acid. A stirring apparatus will need to be rigged up. It should be stirred with a fish tank aerator and pump. This compressed air is the only thing that's really safe to stir the mixture as nitration is taking place. As the acid mixture cools, a weight of glycerin or glycol should be measured out. For glycerin it should equal 1/6 the total weight of the acid mixture. For the glycol it should equal 1/6 of the total weight of the acid also.

When the temperature of the acid mixture reaches 0-5 degrees C the addition of the glycerin or glycol is begun after the mixed acids have begun being stirred by the air. Again this agitation of the mixed acids is very important. It will create a gradual rise in temperature and ensures the complete nitration of the glycerin or glycol as it is added. The glycerin-glycol is added in small quantities with a careful eye kept on the temperature of the acids. If at any time the temperature of the acids rises above 25 degrees C, immediately dump the acid-glycol-glycerin into the ice bath. This will prevent the overheating of the nitroglycerin or glycol and it's subsequent explosion. If the temperature rises close to the 25 degree mark, by all means, stop the addition of the glycerin or glycol. Wait until the temperature starts to fall before continuing the addition.

The glycol will generate more heat during the nitration than will glycerin. The ice bath may need more ice before the reaction is complete, so add when necessary. After the addition of the glycerin or glycol is complete, keep the agitation up and wait for the temperature of the glycerin to fall to 0 degrees C. Stop the agitation of the mixed acids and the nitroglycerin. Let the mixture set. Keep a watch on the temperature just in case. A layer of nitroglycerin or nitroglycol should form on top of the acid mixture. This should be removed with a glass basting syringe. Carefully place this with it's own volume of water (distilled) in a beaker. To this add small quantities of sodium bicarbonate to neutralize the acid remaining in the nitro compound. In all steps with this nitro-oil, keep the oil at ten degrees C or colder for the glycol. When the addition of the bicarbonate no longer causes a fizzing (reacting with the excess acid), check the water-nitro with litmus paper (E. Merik). The reading should be around 7. If it is below 6.5, add more bicarbonate until the reading is close to seven or is seven. The nitroglycerin or nitro glycol should be settled to the bottom. It should again be sucked up off the bottom into the clean basting syringe (glass). USE EXTREME CAUTION WHEN HANDLING THIS NITROGLYCERIN OR NITROGLYCOL, BECAUSE THE SLIGHTEST BUMP COULD POSSIBLY EXPLODE IT. WHEN SUCKING THIS OIL OFF THE BOTTOM OF THE WATER DO NOT BUMP THE BOTTOM WITH THE TIP OF THE BASTING SYRINGE! If necessary, suck up some of the water and remove it from the nitroglycerin or glycol using forecepts and small pieces of calcium chloride. The calcium chloride is placed in such a way that it only contacts the residual water in the nitroglycerin or nitroglycol. To make this oil safer to handle, add acetone to the nitroglycerin or glycol in the following proportions:

25% acetone 75% nitroglycerin or nitroglycol

This will make the oil less sensitive to shock. This oil, when so mixed will still be sensitive to a #8 blasting cap. Remember that the oil contains this acetone when measuring out the oil to be used in other explosives. It may be mixed in the formulas that call for nitroglycerin or nitroglycol and will usually improve the incorporation of these mixtures. To obtain maximum cap sensitivity the acetone should be allowed to evaporate before use of the finished explosive compound.

This oil should not be stored if at all possible. But if completely necessary store in a cool or cold, dry, place when it is free of acidity. Acidity in this oil can cause the explosive decomposition of this oil in storage.

These oils, if handled or their fumes breathed, will cause

tremendous headaches and should be avoided at all costs. They are cardiovascular dilators when contacted and extreme care should always be used when handling these explosives.

As stated earlier, these explosive oils have been produced in large quantities and therefore should be reasonably safe. THIS MANUFACTURE PROCESS SHOULD NEVER BE TRIED BY SOMEONE THAT IS UNFAMILIAR WITH CHEMISTRY, CHEMISTRY LAB PROCEDURES, OR THE EXPLOSIVE COMPOUNDS PRODUCED AND THEIR DANGERS!

Nitroglycerin and nitroglycol detonate at approximately 6700-8500 m/sec (depending on the power of the detonators - the stronger . . . the higher the velocity).

EXPLOSIVES FOR KIDDIES

Ok, I've described some very difficult procedures involving chemical compounds that may not be available to everyone . . . so I will now describe two classic formulas that can be manufactured easily and make relatively harmless explosions.

The first involves hydrochloric acid. This acid has MANY different names but can be bought very easily from your local hardware store as Muriatic acid used for cleaning sidewalks etc. It will only cost about \$5 for enough acid to make plenty of bombs.

Once you have the acid, you will need plastic soda bottles, the two liter ones work nicely, and one or three liters work quite well also. Before opening the bottle of acid (do this outside as the fumes are most mortifying) make up several sticks of tin foil. To do this, take a sheet of tin foil about three feet long. Roll the tin foil as if it were a joint along the length of the large piece you have just pulled out (so you have a three foot long tube of tin foil). Then rip this tin foil "joint" into pieces, each about three inches long. You will only need 7 or 8 of these three inch pieces per bomb.

Finally you fill the empty soda bottle about 2 inches full of the Muriatic acid (hydrochloric) and add 7 or 8 sticks of tin foil. If you want to be exact and not waste any of the acid, check it's molarity, and calculate the proper amounts of each of the reactants. Put the cap back on TIGHTLY and give it a good shake,

then place it down and leave quietly. In about 25 seconds the bottle will expand profusely and then explode with the sound equivalent to a half stick of dynamite. It can also send a mailbox "hurling 25 feet into the air" as noted by one local newspaper.

I recommend you wear protective glasses, gloves, and a respirator while performing this one. Also, do not try it in a glass container, the lid will give out before the glass and you will only get a large toxic cloud of mostly hydrogen and water vapor (hmmmmmm).

The second bomb is even simpler than the first. Get a tennis ball. Stab it with a sharp object, making a small slit. Buy some "Sock it" or other strong chlorinating compound from a hardware store during the outdoor swimming season or from a swimming pool store year round.

Now all you have to do is fill the tennis ball full of the chlorinating compound (especially one used for shock chlorinating), this is done very easily with a plastic funnel. Then make sure you are outside, and fill the ball (again using a funnel) with regular gasoline (lawn mower type will do just fine). Saturate the chlorinating compound quickly and don't hold the ball in your hands. If you did it right, in about 10 seconds the ball will start to hiss then burst into flames.

This is not a very impressive explosion but it can be fun and interesting especially to a pyro. This works especially well for blowing up cars. Substitute a ping pong ball for the tennis ball, use less gas, and drop it into a car's gas tank. Get the hell out, and don't tell the feds where you got ANY of these crazy ideas!

Well that about raps it up! I hope you have lots of fun with these Kitchen Improvised Explosives and if you have any questions, comments, or lawsuits, you can reach me through Gordo at the BLACK PLAGUE BBS (201) 701-0647 home of the Dissident Aggressors Alliance, Dial-A-Bomb Threat, and the Anarchists' Alibi.