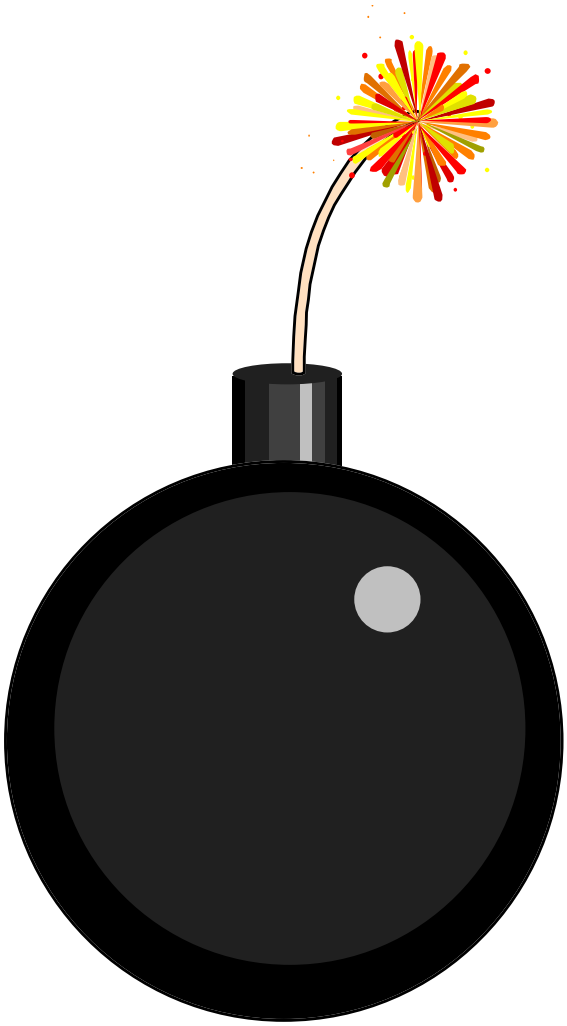
The Mujahideen Explosives handbook



By Abdel-Aziz

EJ-Preface

This book is part of the Encyclopedia Jihad, collected and distributed by the **Organisation for the Preparation of Mujahideen**, with the help of other Islamic jihad organizations and individuals. The aim is to further the military/political/etc. preparations, skills and knowledge of Mujahideen the world over.

The original idea came when I was in Afghanistan and came across an Encyclopedia of War which the Arab Mujahideen had written under the instruction of the late Sheikh Abdullah Azzam (shaheed inshallah). The encyclopedia consisted of approximately 11 volumes on a variety of military skills ranging from weapons to unarmed combat to explosives. The original Afghan-Arab encyclopedia of war was written in entirely in Arabic and weighed approximately 20kg, thereby limiting it's distribution and readership enormously.

It is hoped the Encyclopedia Jihad will not only further that idea, but also build on it by bettering the quality and quantity of information available. Furthermore, by utilizing modern computer communication methods, the encyclopedia will inshallah be distributed the world over; continuously being updated.

Readers are encouraged to help in this endeavor. Don't just benefit from it!

As payment for this book, a contribution of one book which would add to the value of the Encyclopedia Jihad is requested. Instruction on how to do this is provided later on. *Please do not ignore this request.*

The Encyclopedia Jihad is just one of our projects, and thus reserves only a limited time from us. Time is restricted further as we have to work to feed our families and do not get financial assistance from governments agencies, like our opponents do. Furthermore, we frequently have to leave our homes for undefined periods to fulfill other projects, further reducing our time. If readers do not contribute, then expansion of this encyclopedia will be very slow. Inshallah, you will be blessed for your contributions.

Finally, I ask that Allah (SWT) helps us in all our Islamic endeavors, strengthens our weaknesses and makes this project as well as other current and future projects successful.

Assalaamalaikum Wa Rahmatullah Wa Barakatu.

Abdul Muntaqim

(Servant to the Avenger of Evil)

O.P.M.

ORG. FOR THE PREPARATION OF MUJAHIDEEN

Payment

As stated in the introduction, a payment is requested from you for reading this book.

The request is that you contribute to the Encyclopedia Jihad, by scanning a military book of your choice. This leaves a wide variety of urban / rural / terrorism / counter terrorism / conventional warfare topics open to you. If you have a book which is not military but you feel would benefit then still send it. Here's what you will need to do.

Find the following hardware and software.
1. Computer.
2. Scanner.
3. Adobe Capture software (or plug-in as used by Adobe Exchange).

Scan the book and convert to PDF format using Adobe Capture. (Black and white pages should be scanned at 600dpi. Grayscale/color at 400dpi.)

If you don't have the relevant software, then request it from us, and we'll send it to you. Instructions on how to communicate with us follow.

Communication

You may communicate with the O.P.M. via the Internet. Our current e-mail address is **o-p-m@mailexcite.com**. This will almost certainly change in the future. To find the latest e-mail address follow the instructions in the sub-section 'Finding the O.P.M.'.

It is suggested that you use PGP encryption when you communicate with us. If you do not know what this is then you'll have to find a computer literate friend who can teach you. The PGP software is widely available on the Internet.

Our PGP key follows:

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If all of the above does not make any sense to you, don't worry. Just find a friend who is computer literate and regularly uses the Internet. They will know what to do.

Finding the O.P.M.

To find our latest e-mail address do the following.

Send an e-mail to **pgp-public-keys@keys.pgp.net**. In the Subject: line, enter the following text "**mget O.P.M.**" or "**mget 0xBE8D2DBB**".

Eg: Your e-mail message should look like this.

To: pgp-public-keys@keys.pgp.net
Subject: mget O.P.M.

A few days later, you will receive our latest pgp public key, which will have our latest e-mail address. To find out more about pgp key servers send the following e-mail message:

To: pgp-public-keys@keys.pgp.net
Subject: help

This will send you instructions on how to use it's services. The information is also available via ftp and www sites. Read and learn how to do this.

Newer versions of PGP allow you to do this search very easily from the menu.

Encyclopedia Jihad Reference

Name:	The Mujahideen Explosives Handbook
Author:	Abdel-Aziz
Filename:	EJ1.PDF
Date written:	Feb 1996
Date entered EJ:	Feb 1998
EJ Revision:	1.0
Pages:	77
Size:	350K approx.
Synopsis:	Basic manual for synthesis of explosives.
Notes:	Read Introduction carefully to understand problems in book
Acknowledgments:	Creating course: Abu Khabaab Typing: Abdel-Aziz Organizing PDF: Abdul-Muntaqim

Contents

Table of figures

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِيْمِ

1. Introduction

This book is a copy of my notes during an explosives course with certain 'terrorist groups' or 'freedom fighters' depending on which side of the fence you sit on. I have not bothered to clean it up as a published book should be, but it is left in a rather messy form, as my notes were at the time.

As I was learning from people whose first language was not English, some of the names of chemicals, properties etc. are wrong. Also, do not expect to get the best yields from these mixtures.

On the positive side, you can be confident that all the explosive mixtures have been tested and do actually work very adequately.

After finishing the course, I moved onto another unit for different training, where I met the original developer of this course. He informed me that it was several years old, completely out of date and I needed to be updated, which I have been in the process of ever since.

For you, I would suggest, that you start with this book if you have nothing else. It will definitely allow you to blow the roof off, but perhaps with less efficiency than a rocket scientist. If you are a perfectionist like myself, then perhaps you should study published works on explosives such as the original "The Chemistry of Powder and Explosives", and it's modern version which consists of several volumes. These books are the starting point if you want to gain considerable expertise in this area.

Remember, to be good in this field requires expertise in many fields such as:
1. Improvised explosives: when you can't get the good quality materials.
2. Demolition: for application of explosion.
3. Shaped charges: for more powerful application of explosion.
4. Electronics: Very, Very useful. For triggering the explosion in a thousand different ways.
5. Radio control: For triggering from a distance.

I think you get the idea.

One final point to remember is that, explosives accounts for 1% of Mujahideen activity with 99% media coverage. Don't get carried away with it unless you are destined to be an expert in this field. Basic fitness, field craft, weapons training etc., should be your foundation.

If you wish to contact me, I can be reached via O.P.M. (Org. for Preparation of Mujahideen).

Assalaamalaikum until next time.

Abdel-Aziz
(7 February 1996)

ps. I had to add this warning as I've seen a strange trend in *wannabe* Mujahids lately!

Don't become an over paranoid James Bond figure, especially when you haven't done anything illegal even!

Don't get carried away with silly movies/books (bravo 2 zero) or propaganda about 'special forces' such as SAS, Seals etc. They're just a bunch of boys with big egos and good at running long distances.

Equally, don't think there is such a thing as a super terrorist. I've been with the likes of Hekmatyer, Black September and associates of Carlos the Jackel, and just like the 'special forces', they're only human.

The training and preparation is nothing compared to the strength of the individual's character and the assistance Allah provides on the day!

2. Basics

2.1 Preparation of Laboratory

Method & Care to work in laboratory

1. Note book must be with strong cover.
2. Write all your experiments in detail.
3. Don't use loose sheets.
4. Don't rely on your mind.
5. Describe your experiments.
6. Don't delete written mistakes completely. Strike 2 lines across mistake, so that mistake can be seen.
7. Your notebook must be clean and organised.
8. You must write date, result, aim and your observation of the experiments.
9. In laboratory, eating and drinking is prohibited.

2.2 Substances and Symbols

Name	Symbol	Improvised purchase (need preparation)
1. Acetone	C_3H_6O	Used in nail polish remover
2. Alcohol	C_2H_5OH	
3. Aluminium Powder	Al	
4. Ammonia Hydro Oxide	NH_2OH	
5. Ammonium Nitrate	NH_4NO_3	This is fertiliser
6. Ammonium Oxalite	$C_2H_8N_2O_4$	
7. Aniline	$C_6H_5NH_2$	
8. Barium Nitrate	$BaNO_3$	
9. Benzine	C_6H_6	Used in super petrol or aeroplane petrol=100%
10. Calcium Oxide	CaO	
11. Charcoal (carbon)	C	Leftover from burnt wood
12. Dye Methine Aniline	$CH_3CH(NH_2)_2$	
13. Glycerine	$C_3H_5(OH)_3$	
14. Hexamine	$C_6H_{12}N_4$	
15. Hydrogen peroxide	H_2O_2	Used in hair dye and ear cleaners
16. Lead Nitrate	$Pb(NO_3)_2$	
17. Mercury	Hg	Get from thermometer
18. Nitro Benzine	$C_6H_5NO_2$	Available in market. Called Mari Ban oil, used to kill the worms of a babies stomach
19. Phenol	C_6H_5OH	
20. Nitro Cellulose	C6H6O5(ONO 2)???	
21. Potassium Chlorate	$KClO_3$	Used in matchstick heads
22. Potassium Nitrate	KNO_3	

23. Potassium Permanganate	$KMNO_4$	
24. Silver Nitrate	$Ag(NO_3)_2$	
25. Sodium Azide	NaN_3	
26. Sodium Bi-carbonate	$NaHCO_3$	Baking Soda
27. Sodium Carbonate	Na_2CO_3	In washing powder or Soda Ash
28. Sodium Chlorate	$NaCLO_3$	
29. Sodium Nitrate	$NaNO_3$	Mix salt and acid together ie.NHO3 to Na
30. Sulphur	S	In any herbal shop
31. Sulphuric Acid	H_2S0_4	From car battery water = 5-10% H_2SO_4

2.3 Definition of a pure substance

A pure substance consists of only 1 type of molecule.
We should compare our prepared substance with a sample of official 100% pure substance. For this purpose, we use the following methods to compare:

1. Melting point.
2. Boiling point.
3. Reflection with light.
4. Infra red rays (infra red lamp is available in the market). **Infra-red rays are only for solid substances**

2.4 Levels of concentration of Solutions

2.5 Filtration

Filtration is done by a special paper which is called filter paper and it is available everywhere from chemists.

2.5.1 How to prepare filter paper for filtration

Figure 1: preparing filter paper for filtration

We prepare this so that it has gaps in it. When we drop a liquid in it for filtration, the air creates pressure from these gaps, which helps to speed the filtration. **Never allow the liquid to overflow above filter paper.** The following apparatus is used for filtration:

1. Filter paper
2. Long & Funnel

3. Stirring rod
4. Iron stand with ring

Figure 2: Filtration apparatus set-up

2.6 Purification of substance

To purify a substance means to free the substance from any acid it may contain. We use plain water or 2% concentrated Sodium Carbonate solution. Also use PH paper to check the acidity. When PH paper becomes dark green or blue colour, it means the substance is now free from acidity.

Now dry the substance in a shade and dry. When it becomes completely dry, we have acquired a purer solution. **If you want to dry the substance quickly, we can use an oven, fixing the temperature to less than 40°C.**

2.7 Distillation

Distillation means that we get rid of impurities by heating and then condensing it. Then we are left with the pure substance in a good form. The whole process depends upon the extent of temperature on which it changes into gas form. To know distillation we see the following example.

2.7.1 Example

Use low concentrated Nitric Acid (HNO_3) and with the help of distillation, we get powerful Nitric Acid (HNO_3). We also use the water cool condenser in this process.

Figure 3: Distillation

Put low concentrated Nitric Acid (HNO_3) in the flask and on the heater when temperature will reach 70-75°C, acid will change into gas and when it goes through the water condenser it becomes liquid due to the continuous flow of water in the

condenser. We get the powerful Nitric Acid (HNO_3) on the other end of the condenser in dark colour bottle. This can be 98% concentrated.

2.7.2 Note

1. Seal all the joint and use Vaseline or grease to stop leakage.
2. Never fill the funnel more than half from the low concentrated acid.
3. To slow down the reaction use some stone or glass pieces.
4. Control the temperature with the help of thermometer.

2.8 The theory of Mixes

A good mixture must contain 2 main substances. The first must be rich in Oxygen and the second must be able to react very fast so that it changes and multiplies it's volume. This is what we call explosives.

2.8.1 Good producers of Oxygen (O)

1. Potassium Chlorate ($KClO_3$).
2. Potassium Nitrate (KNO_3).
3. Ammonium Nitrate (NH_4NO_3).
4. $KMnO_4$.
5. Sodium Chlorate ($NaCLO_3$).

2.8.2 Makers of good reaction with Oxygen (O)

1. Aluminium (Al) powder.
2. Magnesium (Mg) powder.
3. Mixture of Carbon (C) and Sulphur (S).
4. Mixture of Carbon (C) and Sugar.
5. Mixture of Carbon (C) and Wood.
6. Mixture of Flour and Starch.

2.9 How to use an Isolate Funnel and Container

This apparatus is used to separate liquids which do not dissolve, e.g. Oil and Water.

Figure 4: Using an Isolate Funnel or an Isolate Container

2.9.1 Procedure

It is difficult to separate Nitro Glycerine ($C_3H_5(ONO_2)_3$) from Acid, but we can do this job with the help of an Isolate Funnel/Container easily. For this we drop all the solution into the container. Nitro Glycerine ($C_3H_5(ONO_2)_3$) will go down and stay at the bottom of the Funnel and the Acid will float. Open the tap of the funnel and get Nitro Glycerine ($C_3H_5(ONO_2)_3$) coming out. Close the tap as the Nitro Glycerine ($C_3H_5(ONO_2)_3$) finishes. Wash this with 2% Sodium Carbonate (Na_2CO_3) and then do this procedure again to get pure Nitro Glycerine ($C_3H_5(ONO_2)_3$).

2.10 Definitions

Point of explosion	The temperature at which a substance explodes.
Boiling point	The temperature at which a liquid changes into gases.
Melting point	The temperature at which a solid object changes to a liquid.
Flaming point	The temperature at which a substance catches fire.
Freezing point	The temperature at which a substance freezes.
Nitration	When Nitric Acid (HNO_3) is mixed into a substance.
Oxidation	When Oxygen is mixed into a substance.
Reduction	
Equivalent weight	When 2 objects have the same weight.
Specific density	

2.11 Laboratory preparation

2.11.1 Safety Measures

Divided in 2 main parts.

1. Safety measures for making explosives.
2. Safety measures for making poisons.

2.11.2 Safety system for explosives

All explosives are dangerous and poisonous. These are highly flammable and explodable. These are both in liquid and solid shape. For this we need a good quality safety system in our laboratory.

2.11.3 Qualities of a good laboratory

1. Minimum number of students at one time.
2. Every student must have a place of 2 square metres.
3. Students should always be in sight of the teacher.
4. Electricity and gas connections must be in excellent condition. Stop all unnecessary connection.
5. Always wear gloves and protective glass during work.
6. Working tables must be covered with “Farmica”, and if possible also cover the walls of the laboratory with Farmica. Farmica doesn’t react with anything.

7. The floor of the laboratory must be dry every time.
8. Use canvas shoes with rubber sole.
9. Keep silent and don't run in the laboratory.
10. Air ventilation system must be in excellent condition or it has a reasonable number of exhaust fans.
11. Chemical store must be safe and separate from the laboratory.
12. Try your best to use a hot plate heater rather than naked flame burners.
13. A first aid box must be complete and handy.
14. If you are in an earthquake area, the laboratory must be on the first floor and built very strong.
15. Place your apparatus as follows:
    - Upper shelf = Plastic apparatus.
    - Middle shelf = Glass apparatus.
    - Lower shelf = Iron apparatus.
16. Laboratory must be tidy and clean every time.
17. You must have a water connection and buckets of sand in the laboratory.
18. There should be a smoke and fire sensor in the laboratory.
19. **The doors and windows of the laboratory must be booby trapped.**
20. **New comers must be given special instruction about the working of the laboratory.**
21. **Entry and exit must be separate doors.**
22. **A laboratory must have a shower and sink to wash your body and eyes.**
23. **You must have a good quality mask and gas mask.**
24. **No smoking, drinking or eating allowed.**
25. **All security measures must be displayed on the wall.**

2.11.4 Additional safety measures for explosives

1. Don't store main charges and detonators together.
2. Solution of 2% Sodium Carbonate (Na_2CO_3) must be handy always.
3. Don't drop the initiator on the floor.

2.11.5 Safety measures for poisons

1. Antidote must be prepared and handy before making a poison.
2. A good quality of anti-poison injections should be in the first aid box.
3. When working with poisonous gases, wear a gas mask.
4. Always wear gloves and protective glasses.

2.11.6 Clothes and other items to wear in the laboratory

1. Take only what you need.
2. Wear clothes with tight sleeves and easily washed.
3. Don't wear rings, ties and woollen clothes.
4. Must wear gloves and protective glasses during work. A full body suit would be nice.
5. Wear protective glasses if a chemical reaction is going to create bubbles.
6. Nails must be clean and cut.

7. Wounds must be covered with waterproof plaster.
8. Never touch your eyes with your hands.
9. Don't touch anything without your teachers instructions.
10. When starting, don't prepare large quantities.
11. Beginners must be kept away from dangerous substances.
12. Don't run in the laboratory.
13. Keep silent. Make dhikr when working. "La illaha il Allah" (This is what you read before you die. You won't get time to read it if you make a mistake).
14. Don't play with mixtures. Don't mix any substances without full knowledge of the result.
15. Full concentration must be given to the task at hand, or that may be your last task!
16. Never use a beaker or apparatus for eating and drinking.
17. Don't drink water from the laboratory's tap.
18. Apparatus must be cleaned and on it's place after use.
19. Don't drop the "radical" of the substances on the floor.??
20. Always report your laboratory activities to your teacher.

2.11.7 Preparation for using flames

1. Don't approach the flame with long hair or a big beard.
2. Light the match before turning the flame gas on.
3. Keep the flame away from:
    - The chemical store.
    - Oven.
    - Burning substances.
4. When picking up hot apparatus, never use gloves. Always use proper cloth or carrying equipment.

2.12 How to cut a glass pipe tube

1. Make a round circle around the pipe using a cutter.
2. Now cover the tube with cloth and push it outside.
3. Break it away from the face.

2.13 Bending a glass pipe

1. To bend a glass pipe, use a fish tail flame.
2. Heat it intensely and bend it slowly, avoiding a crack in it.

Figure 5: Bending a glass pipe

2.14 How to handle hot substances

For example, handling Sodium because it is highly flammable.

1. Always put this in Kerosene oil.
2. Don't touch with bare hands. Always use gloves.
3. If some material drops on the floor, cover it quickly with Kerosene oil.
4. When a breaking or cutting, use a special cutter designed for the task.
5. Don't heat it in the wash basin.
6. Always cut them in Kerosene oil.
7. Dry your hands completely before touching.
8. **Never put it near the acid because, with the reaction of the acid, it will produce enough Hydrogen to cause an explosion.**

3. Definition of this course

This is a course which teaches the easy production of explosives, poisons from easily available substances in the enemy area. These products must be used quickly and should not be stored for more than 72 hours without special precautions.

3.1 Definition of Explosive

An explosive is a compound or mixture which is capable of changing it's form to a large quantity of gas in a very short time. This is achieved with the help of initiative causing a very pressure and producing a mechanical outcome.

3.2 Types of Explosives

3.2.1 Initiator

1. Mercury Fulminate $(CNO)_2Hg$.
2. Lead Azide (PbN_6).
3. Silver Azide.
4. Acetone Peroxide.
5. Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$.

3.2.2 Main charge

1. Nitro Glycerine $(C_3H_5(ONO_2)_3)$.
2. Dynamite.
3. Tri-Nitro-Toluene $(C_6H_2CH_3(NO_2)_3)$. Also called TNT.
4. RDX.
5. Nitro Methane (CH_3NO_2).

3.2.3 Launching charge

1. Nitro Cellulose.
2. Black powder.

3.2.4 Burning charge

1. Sodium bum.
2. Phosphorus.
3. Napalm.
4. Molotov.

4. Sulphuric Acid (H_2SO_4)

To prepare the first initiator, Mercury Fulminate $(CNO)_2Hg$, we need the following substances.

1. Alcohol (C_2H_5OH).
2. Mercury (Hg).
3. Nitric Acid (HNO_3).

First 2 substances are easily available in the market, but Nitric Acid is prepared after preparing Sulphuric Acid.

The first method to get the Sulphuric acid is from the car battery water. Put battery water into a beaker. Put the beaker on a hot plate heater. If the hot plate heater is not available, we can use a TAWWA (the roti tawwa). Boil it until it reaches oil colour and only 1/3 original liquid is left (2/3 is evaporated). This is 98% pure Sulphuric acid.

H2SO4 + H2O (heat) = Sulphuric Acid (H_2SO_4)
(Boiling point of Sulphuric acid is 330°C)

To check the purity of the Sulphuric Acid (H_2SO_4):

1. Mix 1:1 Potassium Chlorate ($KClO_3$) and Sugar.
2. Drop 1 drop of acid to this mixture.
3. This mixture gives a very good flame.

Note: This mixture will be used for the timer of the bomb.

5. Capsule Timer

Fill a medical capsule with Sulphuric Acid (H_2SO_4) and put it in the in Potassium Chlorate ($KClO_3$) and Sugar 1:1 mixture. Place initiator (Fulminate, Azide) around it. When the acid eats the surface of capsule and it reacts with the Potassium Chlorate ($KClO_3$) and Sugar 1:1 mixture, it will ignite the mixture. The bright flame which results from this reaction will detonate the initiator.

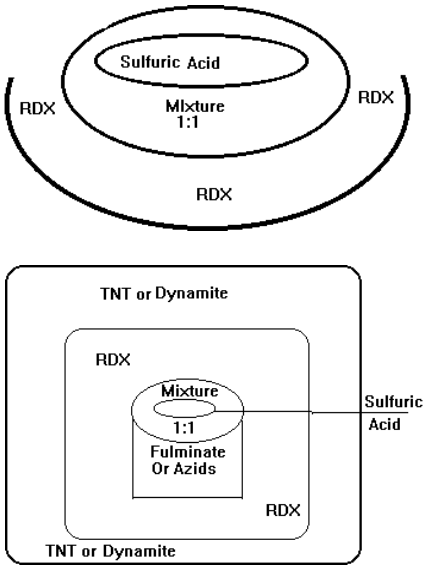
5.1 Special Note

If you want to increase the time, double or triple the thickness of the capsule (i.e. increase the time needed to melt through the capsule) and mix some drops of

Glycerine into the acid. It will slow the reaction of the Sulphuric Acid (H_2SO_4) on the capsule.

If you increase the quality of the Potassium Chlorate ($KClO_3$) in the mixture, it will increase the blast. If you increase the sugar, it will increase the flame.

Figure 6: Capsule Timer -done



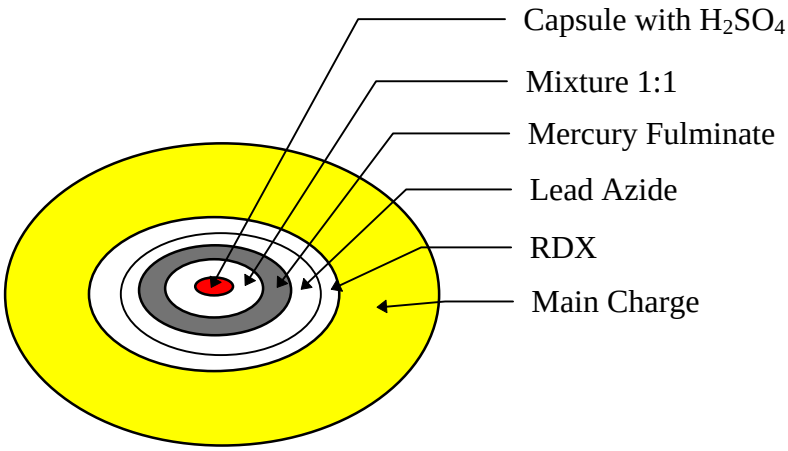
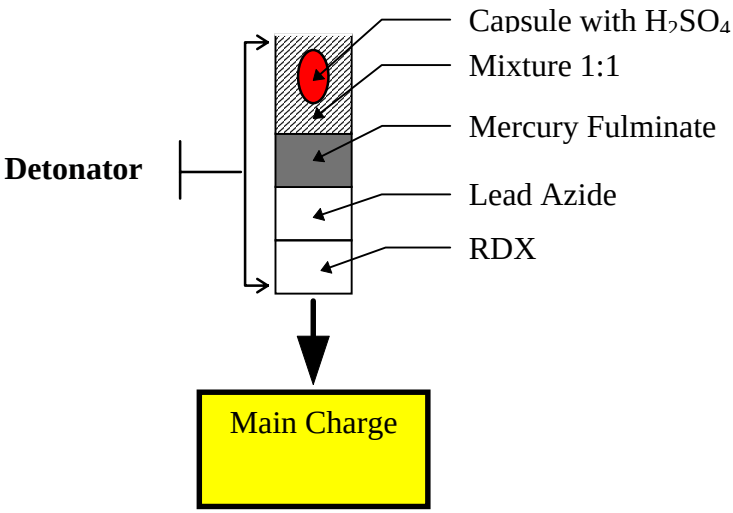


Figure 7: Capsule timer detonator -done



5.2 Results

5.2.1 Abdel-Aziz (3-12-95)

We put 5ml of Sulphuric Acid (H_2SO_4) in a capsule made from Rice. It took 40 minutes to burn through the capsule. This was because the Sulphuric Acid (H_2SO_4) was 2 years old and had been stored in a see through container (i.e. Letting light in, which weakened the Sulphuric Acid (H_2SO_4). Had we stored it in a dark glass container, the Sulphuric Acid (H_2SO_4) would still be strong). If the Sulphuric Acid (H_2SO_4) had been stronger, the time taken would probably have been about 25 minutes.

5.3 Nitric Acid (HNO_3)

Preparation of Nitric Acid (HNO_3) from Sulphuric Acid (H_2SO_4).

5.3.1 Procedure

Name	Ratio
Ammonium Nitrate (NH_4NO_3)	1
Sulphuric Acid (H_2SO_4)	2

Take Ammonium Nitrate (NH_4NO_3)Which is a fertiliser and available in the market. If fertiliser is humid then give a sand bath to the fertiliser. This is done by placing a pot of fertiliser in a pot of hot sand. After some time, the fertiliser will be completely dry.

You can replace Ammonium Nitrate with any Nitrate. E.g. Sodium Nitrate or Potassium Nitrate.

5.3.2 Preparation

1. Crush the Ammonium Nitrate (NH_4NO_3) and put it into a Florence flask.
2. Drop the Sulphuric Acid (H_2SO_4) into flask.
3. For safety, put some stone or glass pieces in the flask. This will slow the reaction.
4. When apparatus is set like in Figure 8, heat and after some time there will be boiling in the flask.
5. The produce Nitric Acid (HNO_3) will be brown gas (fumes).
6. When the brown fumes pass through the condenser, increase the speed of the water.
7. Drops of Nitric Acid (HNO_3) will be added to the colour bottle at the other end of the condenser.
8. Cool this bottle with the help of ice and water.
9. When white fumes come from the flask, it means that the reaction is complete.
10. We get 1/3 Nitric Acid (HNO_3) from the mixture.

5.3.3 Equation

$2\ (NH_4NO_3) + (H_2SO_4) ===== 2\ (HNO_3) + (NH_4)_2SO_4$

Figure 8: Preparing Nitric Acid (HNO_3)

5.3.4 Notes

1. Boiling point of mixture is 70-75°C.
2. Stop leakage with the help of Vaseline as it is very dangerous.
3. Store the Nitric Acid (HNO_3) in a dark bottle in a cool place.

5.4 Calculating concentration of Acids' manually

A tool is available to show the concentration of acids. If you don't have this tool then you can apply the following procedure. This procedure takes into account the weight of the acid being tested. The weights are:

1. Nitric Acid = 1.54
2. Sulphuric Acid = 1.98

Put 10 ml of an acid on a scale. Keep adding a weight to the other side of the scale until the scale balances. In this example, the weight added is 8 gm.

1. 10/8 = 1.25
2. 1.25 * 100 = 125
3. 125/acid weight = acid purity.

If you are testing Nitric acid then concentration = 125 / 1.54 = 81.16%.
If you are testing Sulphuric acid then concentration = 125 / 1.98 = 63.13%.

6. Initiators

It is a start, the key to the explosion.

6.1 Mercury Fulminate $(CNO)_2Hg$

6.1.1 Properties

1. It has many colours. Grey, light brown, white. Stronger is grey.
2. Specific density 4.42 (3 times to cement & cement strength is 1.3)
3. It is sensitive to impact, striking pen shock and heat 170°C.
4. It is sensitive from static charge (which is a body charge) shock & heat.
5. It will be explode on 170° C.
6. It can be spoiled by the humidity. For example at 15% of humidity it burns without explosion at 25% humidity it will not burn neither explode.
7. It does no dissolve in the water therefore it is useless as a poison.

6.1.2 Reaction with other metals

1. In the absence of humidity it does not react with copper therefore we use copper capsules for detonator.
2. It does not react with most of the metals except aluminium.
3. With aluminium it reacts to produce non-explosive material.
4. It stores in a cool and dry place from 15-25°C.

6.1.3 Formula

1. $2Hg + 6HNO_3 \rightarrow 2Hg(NO_3)_2 + 3H_2O + NO_2 + NO$
2. $C_2H_5OH + 3HNO_3 \rightarrow C == N - OH + 2HNO_2 + 3H_2O + CO_2$
3. $2[C == N - OH] + Hg(NO_3) \rightarrow [C == N0]_2\ Hg + 2HNO_3$

NB. Possibly replace == with $\Longleftarrow$. 2nd symbol was used in original notebook, but I replaced it with the 1st symbol, as I thought this might be correct. I'm not a chemist!

6.1.4 Ratio for mixing materials for making Mercury Fulminate

Mercury	Nitric Acid 65% conc.	Ethyl Alcohol 100% conc.
Hg	HNO_3	C_2H_5OH
1.5 gm	11 ml	13 ml

6.1.5 Procedure for making Mercury Fulminate (Initiator)

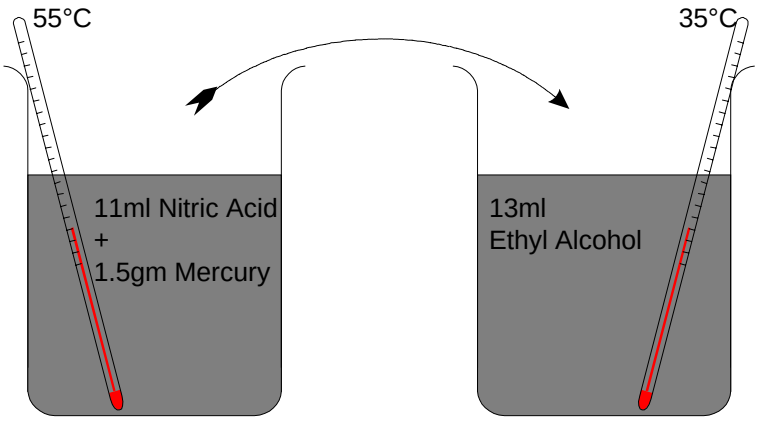
1. Take a beaker 1. Put 11 ml Nitric Acid in it.
2. Mix 1.5 gm Mercury in it and wait until the mercury melts into the nitric acid. There will be brown fumes, these are dangerous and can give you lung cancer. The colour of the mixture is now green.
3. Put 13 ml of alcohol in another beaker 2.
4. Raise the temperature of beaker 1 up to 55°C.
5. Raise the temperature of beaker 2 up to 35°C.
6. When we get the required temperatures for both beakers, add the 1st beaker to the 2nd beaker. (NB. On mixing these beakers the 2nd and 3rd equations will be applied).
7. During reaction white smoke will be formed which are highly flammable, so make sure to keep it away from any fire.
8. If reaction is fast, drop some drops of Alcohol in the beaker, it will slow the reaction. The reaction creates heat, and the heat should not go above 70-75°C as this will cause the Nitric Acid (HNO_3) (yellow smoke) and Alcohol (C_2H_5OH) (white smoke) to evaporate. If the solution goes above 80°C, then it is very dangerous.
9. When reaction is complete we will find grey crystals in the beaker. This is Mercury Fulminate $(CNO)_2Hg$.
10. Put water into the beaker and shake the solution. This cleans the grey crystals.
11. Filter this solution. When water has drained, add Alcohol (C_2H_5OH) into the filter paper thus washing the Mercury Fulminate ($(CNO)_2Hg$) further.
12. Dry it in a shade in open air.
13. Store it in a dry and cool place at a temperature of 15-25°C.

??Can we use a naked flame to heat solutions or do we need a hot plate heater.

6.1.5.1 Notice

1. When adding the 1st beaker to the 2nd beaker, the temperature must be accurate which is 55°C and 35°C. It is better to raise the temperature of each beaker by 1-2°C so that by the time we mix them, we get the accurate temperature.
2. If the action does not take place, raise the temperature until you see the white fumes come.
3. If there is fire, don't worry just cover the beaker with the watch glass.
4. Other FULMINATE initiators are used as detonators or capsules of many shells or bullets. e.g. Silver fulminate, ... fulminate.

Figure 9: Mercury Fulminate $(CNO)_2Hg$ -done



6.1.5.2 Test results

All heating was done with a hot plate rather than a naked flame heater for these tests.

6.1.5.2.1 Experiment 1: Witnessed by Abdul-Aziz

We used 65% pure Nitric Acid (HNO_3). If the purity is too high, it is dangerous and difficult to store because it reacts easily and will burn severely. The Mercury (Hg) was stored with water. The water floated at the top of the solution, and is used to protect us from the radiation given of by Mercury (Hg).

We weighed 1.5mg of Mercury (Hg) and heated it lightly with a hot plate heater to evaporate any water which may have dissolved into the Mercury (Hg). We put the Mercury (Hg) into 11ml of Nitric Acid (HNO_3). The Mercury (Hg) did not dissolve because there was water present in the Mercury (Hg). To get rid of the water, we heated the solution lightly. When the water had evaporated, the Mercury (Hg) started reacting and dissolving into the Nitric Acid (HNO_3).

6.1.5.2.2 Experiment 2: Abdul-Aziz

We used 50% concentrated Nitric Acid (HNO_3). The Mercury (Hg) didn't react very well. We had to continuously heat it to cause a reaction, which would subside every time we took the heat away. Eventually, a small amount of Mercury Fulminate $(CNO)_2Hg$ crystals were formed (maybe 0.3gm) which we left to dry. Their quality was so useless that we threw them away. Using Nitric Acid (HNO_3) of concentration less than 65% will cause useless results like this.

6.2 Lead Azide (PbN_6)

This is used as our second initiator.

6.2.1 Physical

6.2.2 Properties

1. White crystals with 4.8 specific density.
2. It is less sensitive than Fulminate but it has greater power of detonation.
3. When we put small stones in it, it becomes more sensitive for impact.

4. It reacts quickly with the copper producing Copper Azide.
5. This Copper Azide is undesirable because it is very sensitive and it can explode itself.
6. Copper Azide is also very sensitive and it can explode even under water.
7. It's detonator cap is made of Aluminium because it does not react with Aluminium.
8. Solvent in water is poor.
9. Store in Aluminium or Zinc casing.
10. The layer made by exposing to light will be in the colour of greyish yellow.
11. This layer will protect the whole Azide from the light.
12. Therefore it is preferable to dry and store Azide away from light.
13. Exploding point is 380C.
14. Maximum explosion speed is 5300 M/Sec.

6.2.3 Preparation

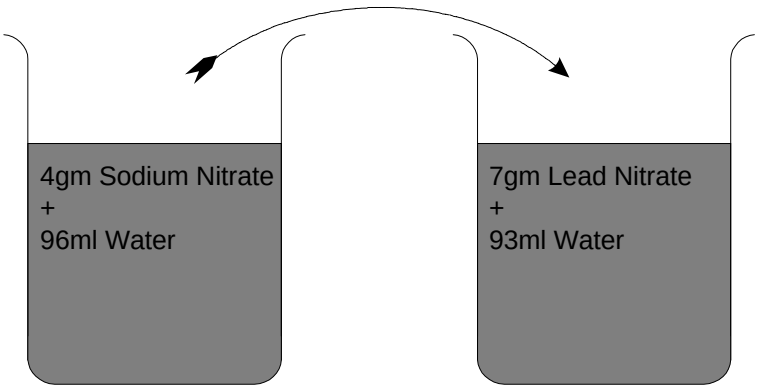
$Pb(N_3)_2$ == PbN_6 (for detonators)

1. Sodium Azide (4%) + water (96%)
2. Lead Nitrate (7%) + water (93%)

Sodium Azide is available in the market for the purpose of checking the pregnancy of the women. It is a very strong poison. Lead Nitric can be collected from scientific stores and it can be also made by adding lead and Nitric Acid.

1. Take a beaker and put 96 ML water in it and add 4 gm Sodium Azide in it.
2. Take another beaker put 93 ML water in it and add 7 gm Lead Nitrate.
   NB. Dissolve both substances in the water well.
3. Drop the solution of beaker 1 (Sodium Azide) into beaker 2 (Lead Nitrate) and stir it with a stirring rod.
4. You see the formation of white crystals in the 2nd beaker that is Lead Azide.
5. Filter the crystal and dry them in the shade.

Figure 10: Lead Azide (PbN_6) -done



6.3 Silver Azide

Preparation is exactly like Lead Azide, but replacing the Lead with Silver.

6.4 Lead Azide (2nd method of preparing- Not tested)

Prepared with the help of Lead Acetate. Lead Acetate is used to prepare commercial plastic.

6.4.1 Procedure

To prepare the Lead Azide, the ratio of the substances are as follows:

Sodium Azide	Lead Acetate
NaN_3	$(CH_3COO)_2Pb$
2 gm in 20 ml of water	1 gm in 20 ml water and also 0.3 gm of Na_2CO_3 (Sodium Carbonate)

6.4.2 Preparation

1. (Beaker 1). Prepare 1 gm of Lead Acetate $(CH_3COO)_2Pb$ with water in a beaker. Add 0.3 gm Na_2CO_3 (Sodium Carbonate). Dissolve it well.
2. (Beaker 2). Make a solution of 2 gm Sodium Azide (NaN_3) with 20 ml of water. Dissolve well.
3. Mix beaker 1 in beaker 2. The crystals will be formed.
4. Filter them and dry them in the shade. Don't dry completely.
5. Add Dextrin or Poly-vinyl alcohol to crystals. Should be 10% of solution.

NB. If crystals become completely dry, then an explosion will occur.

6.5 Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$

This is the last initiator, the formula of Hexamine Peroxide is $(C_6H_{12}N_4)_2O_2$. Hexamine is available from the chemist and it is used in manufacturing the medicines.

6.5.1 Physical properties

1. White crystals with specific density of 1.7.
2. It does not dissolve in water.
3. It evaporates at higher than 40C.
4. It explodes at 200C.
5. Speed of explosion is 4100 M/Sec.
6. It is stronger than fulminate.
7. We produced detonator from it.

NB. Store in a cool and dry place at normal room temperature.

6.5.2 Formula

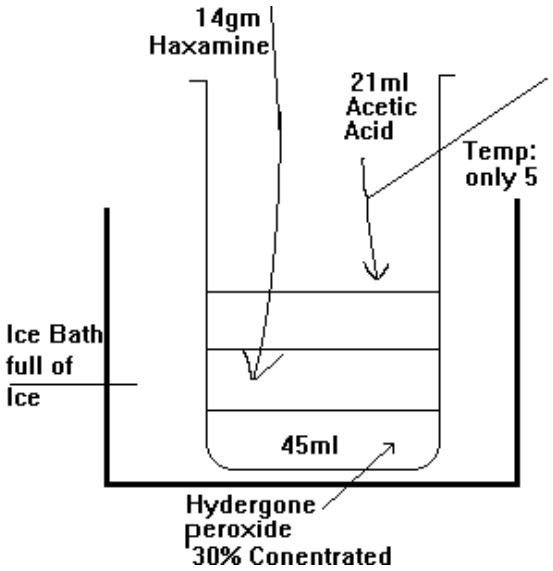
30% concentrated Hexamine ($C_6H_{12}N_4$)	40gm	14gm
Hydrogen peroxide (H_2O_2)	150ml	45ml
65% concentrated Nitric Acid (HNO_3)	30ml	0
Citric acid	0	21ml
	Method A	Method B

Method A produces Hexamine peroxide which should be used within 1 week.
Method B produces Hexamine peroxide which should be used within 3 months.
Store in dark glass, no sunlight, at room temperature.

6.5.3 Preparation of A

1 150ml Hydrogen peroxide (H_2O_2) in a beaker.
2 Little by little, add Hexamine ($C_6H_{12}N_4$) until you have added 40 gm. Stir continuously. The solution must be less than 25C.
3 After mixing Hexamine ($C_6H_{12}N_4$) in Hydrogen Peroxide (H_2O_2), we stir it for 1 hour continuously.
4 After 1 hour, we add 30 ml of Nitric Acid (HNO_3) drop by drop. Stir continuously and keep solution less than 30°C.
5 After mixing the acid, stir for 5-7 minutes.
6 Leave it for 2 hours to allow crystallisation.
7 The whole mixture will become powder form (small crystals).
8 Filter it and dry in sunlight.
9 Store at room temperature, in light proof casing. Plastic container is good.

Figure 11: Hydrogen Peroxide (H_2O_2) -done



6.5.4 Test Results

6.5.4.1 Experiment 1: Witnessed by Abdel-Aziz

Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$ created was of small quantity and bad quantity. Reason was that the Hydrogen Peroxide (H_2O_2) used was very old (maybe 2 years). Hydrogen Peroxide (H_2O_2) loses it's strength with time and since the required concentration for the Hydrogen Peroxide (H_2O_2) was 30% for this bomb, the old Hydrogen Peroxide (H_2O_2) didn't have the required concentration. This was the reason for the useless results.

6.5.5 Preparation using method B

1. Crush Hexamine.
2. Put Peroxide in beaker.
3. Add Hexamine slowly, stirring. Keep under 25°C.
4. Put solution into ice bath, so that temperature is below 5°C.
5. Add 21 ml of citric acid slowly keep temperature below 30°C.
6. Put solution in ice bath for 11-24 hours.
7. Clean with water or Sodium Bi-carbonate.
8. Check with PH paper. There should be no acid. The acid doesn't allow long term storage of an explosive.

6.6 Acetone Peroxide

The preparation for this is available but it is quite useless. It explodes at 86C. Takes 40 hours to make 2-5 gms.

ACETONE PEROXIDE $(CH_3)_2CO_2$

Physical Property

1. It can be used also as a primer cord although it is used in a detonator.
2. These a white crystal which can be explode by the fraction impact heat and little drop of Sulphuric Acid (H_2SO_4).
3. It does not dissolve in the water.
4. It evaporate at the room temp:- and become into gases.
5. There for we store this under water.

Preparation

1. Acetone $(CH_3)_2CO_2$
2. Hydrogen Peroxide H_2O_2
   With the power of 30% concentrated.
3. Sulphuric Acid (H_2SO_4)

Notice:- In market there are 3 types of Hydrogen peroxide is available (because of its concentration, so far we can used the three of them, which one is available to us)

The ratio of the substance will be as follows:

If we have 30% concentrated H_2O_2 made by MERK of England.

Acetone	Hydrogen Peroxide	H_2So_4
30 ML	50 ML	2.5 ML

2. If we have 10% to 15% concentrated H_2O_2

Acetone	Hydrogen Peroxide	HCL or Any Acid
10%	10%	1 ML

or Ordinary available H_2O_2 so we will use the same quantities but very little modification

Acetone	Hydrogen Peroxide	H_2So_4or Any Acid
10%	10%	3 ML

3. If we have 10% to 15% concentrated H_2O_2

Acetone	Hydrogen Peroxide	HCL
10%	30%	2 ML to 5 ML

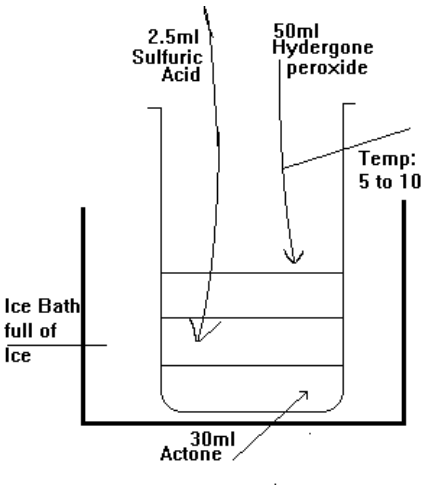
Note:- You must recognised the smell of ascot which is available in a nail polish remover.

Procedure

Here we are preparing Acetone peroxide with 30% concentrated Hydrogen peroxide

Acetone	Hydrogen Peroxide	H_2So_4
30 ML	50 ML	2.5 ML

Figure 12: Acetone Peroxide $(CH_3)_2CO_2$ -done



1. Mix 30 ML of Acetone in the 50 ML Hydrogen peroxide with slow effort also continuous string.

2. Then put this mixture in ice pot and drop the temperature to 5^o C and start adding 2.5 ml Sulphuric Acid (H_2SO_4) drop by drop, controlling the temperature

Note:- Temperature always under control (5^o C to 10^o C)

3. When the whole acid will add stir this whole mixture 5 to 7 minute out of the ice pot.

4. Then store this mixture in the fridge for 8 to 24 hours.

5 when the whole crystals will formed, filter them and then first wash them with water and then with 2% sodium carbonate (Na_2Co_3)

Properties

1. Density is 1.18 and speed of explosion is 5300 M/P/S.
2. It is very sensitive to impact much more than lead azide.
3. It can be dissolved in petrol toluene, Chloroform, Acetone.

Note:- For better result we must wash it with the Sodium Carbonate more than 2%.

Precautions

1. Wash the substance very well, because it is very sensitive to acid.
2. No heat and flame during preparation.
3. Store it at the temperature of 30 to 35^{o} C at cool and dry place.
4. It explode on 86^{o} C.

Special Precautions

If during preparation the temp:- raised to 60^{o} C, drop the whole mixture in the water.

7. Fuses

7.1 Slow burning fuses

1. Burn with the light and flame.
2. It must have a speed of 48 cm/sec.
3. It burns underwater.
4. Under water it can burn at a depth of 90 meters. It can store underwater for 24 hours.
5. If we want to stop a burning fuse, just cut it 2 cm further.

7.2 How to make a time fuse

7.2.1 Preparation

1. Get a sound rubber hole.
2. Wrap it with cotton thread 3 times. Then dip it in road tar (or charcoal) to form an outer layer.
3. Fill it with the burning powder, e.g. White, Yellow or Black powder. Preferable is White powder with sawdust instead of Carbon. Sawdust burns slower than Carbon.
4. A fuse made from plastic of length 2.5?? inches with a diameter of 2mm and filled with White powder (sawdust version) will take 30 seconds to burn.

White powder		
Potassium Chlorate ($KClO_3$)	Sawdust	Sulphur

75%	12.5%	12.5%

7.2.2 Another method of making fuses

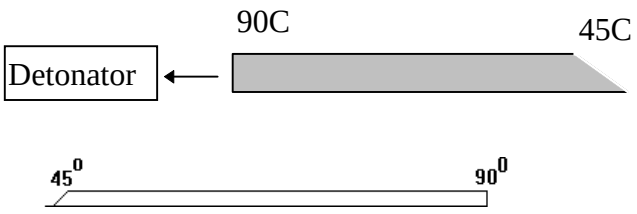
With the help of light string or shoe laces.

1. Dissolve Potassium Chlorate ($KClO_3$) with sugar at a ratio of 1:1 in water and make it into a paste. Dip the string or lace into it.
2. Dip it until it absorbs the mixture.
3. Put it out into the sun to dry.
4. This fuse can't be used under water.

7.3 To identify your fuses

1. Cut the piece of your fuse, burn it and note the time of burning.
2. For proper use, cut 10 cm of fuse from both sides.
3. Cut from the fuse as much as for the time you require.
4. Cut the fuse at an angle of 45° from the end you are going to light, and at 90° at the other end which will be placed in the detonator. See Figure 13
5. Enter the fuse in the detonator with special care, then push the start ending an the detonator with teeth??. Make sure you leave a gap between the initiator and the fuse.

Figure 13: Cutting angles on a fuse -done



7.4 Fast burning fuses

7.4.1 Properties

1. Bigger diameter pipes will be used for the fast burning fuses.
2. Speeds of 60-90 M/sec.
3. It can burn under water and in extreme depths.
4. It is also used for special operations, traps and ambushes.

7.4.2 Preparation

It is similar to that of a slow fuse, but the substances are finer.
It is very special and fine sieved substance will be used.
It will also made with white powder.

7.5 Exploding fuses

This is used for main charges. Primer cord is an example of an exploding fuse.

7.5.1 Properties

1. It consist of a hole pipe which is filled with cotton thread. The main charge will be RDX, Acetone peroxide.
2. The speed of explosion is 6000 to 7000 M/sec.
3. It does not exploded by the flame or heat, it will only burn with them. Therefore, to explode it, you need a detonator.

7.5.2 Preparation

It is similar to the way we prepared slow and fast fuses.

8. Detonators

There are 2 kinds of detonators.

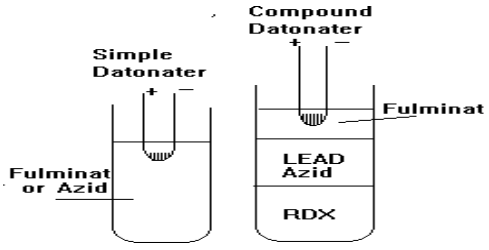
1. Electric detonator.
2. Flame detonator.

8.1 Electric detonator

1. It is made of Aluminium or plastic cylinder, which is open by one side and the other side is closed.
2. It contain at least 1 gm and maximum 1.5 gm of initiators such as Fulminates or Azides.

NB. We will use the element of 6 watt small bulb. i.e. like torch bulbs to ignite the initiator.

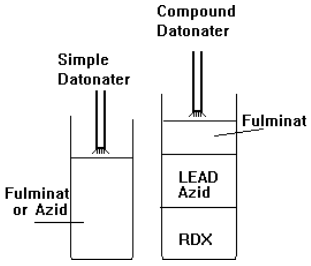
Figure 14: Electric detonators -done



8.2 Flame detonator

The method of flame detonators is the same, but we use a fuse instead of an electric current to ignite the initiator.

Figure 15: Flame detonators -done



8.2.1 Fuse facts

1. A fuse of 2mm diameter, 2.25 inches long and thick plastic will last 30 seconds.
2. A fuse 10 approx. Inches long and made of plastic straw will last 10 seconds.

9. Main Charge

9.1 Mixtures which use Potassium Chlorate ($KClO_2$)

9.1.1 Potassium Chlorate ($KClO_2$)

9.1.1.1 Improvised acquisition of Potassium Chlorate

We can get it from a match pox. We can get 1 gm of Potassium Chlorate ($KClO_3$) from one matchbox.

9.1.1.2 Preparation

1. Take a big pot, fill it half with water. Dip the match sticks of a 50 matchboxes in it.
2. Start boiling the water. Boil it until the heads of sticks dissolve in the water.
3. Now remove the sticks and throw away.
4. Filter the solution through filter paper. Impurities will remain in filter paper. Potassium Chlorate ($KClO_3$) will seep through filter paper with water. (Potassium Chlorate ($KClO_3$) is a very good dissolver in water).
5. Keep heating the mixture until it becomes like mud.
6. Spread the mud onto a glass sheet and allow it dry in sunlight. The result will be Potassium Chlorate ($KClO_3$). It might be reddish or brownish according to

colouring of matchstick heads. Pure Potassium Chlorate ($KClO_3$) is white in colour.
7. When it dries, grind it and then sieve into powder form.
8. Don't strike the Potassium Chlorate ($KClO_3$) during grinding. Grind it with a wood roller on a wooden platform.
9. Store in a cool place.

9.1.1.3 Mixing rules

1. Follow these rules when making all Potassium Chlorate ($KClO_3$) mixtures.
2. It is important to grind and sieve all substances very carefully before mixing.
3. Make sure that the substance is pure.
4. Make sure that crystals of Potassium Chlorate ($KClO_3$) are completely dry. If not, then use a sand bath, or leave it in the sun for a while.
5. Mix dangerous substances in a cool place and cool the substance before mixing. (This is a rule of thumb for all mixtures).
6. Never use a humid substance. Dry first.
7. Start the mixture with less sensitive substances. E.g. Sulphur is not sensitive to carbon so mix them first, before mixing sensitive substances such as Potassium Chlorate ($KClO_3$).
8. For better results, use a fine sieve.
9. Use a plastic sieve to avoid friction.
10. After mixing each new substance, sieve the mixture again.

9.1.2 Yellow powder

9.1.2.1 Formula

Yellow Powder			
Name	Potassium Chlorate $KClO_3$	Sulphur	Aluminium powder
Ratio	2	1	1
E.g. in gms	50 gm	25 gm	25 gm

9.1.2.2 Properties

1. It is dark grey in colour.
2. It is very sensitive, specially with friction, impact or with flame.
3. Friction, impact will explode it.
4. Flame will make it burn with a very bright light (stronger than a camera flash).
5. It will explode with a huge sound, and can be exploded with and without a detonator.
6. It has more power of explosion than Black powder which is used in bullets. The reason for this difference of power is because potassium nitrate is used in black powder, whereas potassium chlorate is used in yellow powder. Potassium chlorate is more powerful than potassium nitrate.

9.1.2.3 Preparation

1. Put 25 gm of Sulphur powder into a bowl.
2. Add 25 gm of Aluminium powder also.
3. Mix it very carefully. Aluminium powder is fly-away. Must avoid friction to avoid explosion in Yellow powder.
4. Grind and sieve the Potassium Chlorate ($KClO_3$), until it becomes fine powder.
5. Add this Potassium Chlorate ($KClO_3$) to the bowl.
6. Mix thoroughly. This is now Yellow powder. Very sensitive. Very powerful.

9.1.2.4 Notes

1. Don't store yellow powder in a hot place.
2. Don't store yellow powder near detonators.
3. Yellow powder can be exploded with a detonator or with a fuse.
4. If you are using a fuse, then put yellow powder in an airtight sealed iron container. The container must be sealed airtight.
5. It is possible to explode yellow powder with impact, therefore it can be used in an impact grenade. Throw from behind a wall to avoid shrapnel hitting you. Place some pebbles or ball-bearings in the container.
6. gms of Yellow powder will in the form of an impact grenade will have the same effect as a standard hand grenade.

9.1.2.5 Results

9.1.2.5.1 Experiment 1: Abdul-Aziz (5-12-95)

Worked fine.

9.1.3 White powder

9.1.3.1 Formula

White powder		
Potassium Chlorate ($KClO_3$)	Carbon	Sulphur
75%	12.5%	12.5%

9.1.3.2 Preparation

Same as making Yellow powder.

9.1.3.3 Results

9.1.3.3.1 Experiment 1: Witnessed by Abdul-Aziz

Worked fine.

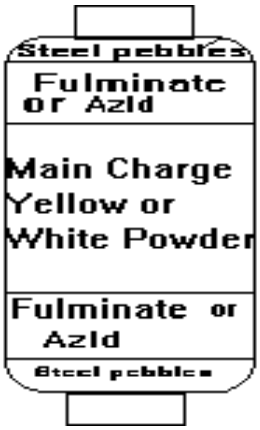
9.2 General mix of the impact bomb

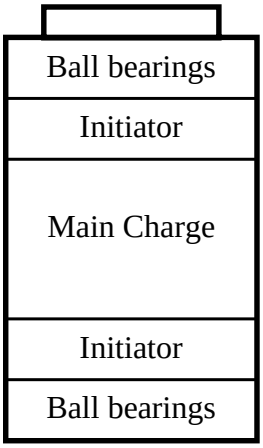
15%	15%	70%
Initiator	Main charge	Explosive
E.g. Lead Azide or Fulminate	E.g. TNT	E.g. Yellow Powder

NB. When using <u>only</u> Yellow powder the percentage will be as follows. This will not be very powerful.

15%	85%
Initiator	Main charge
Azide or Fulminate	Yellow powder

Figure 16: Impact bomb -done





9.2.1 Preparation of impact bomb

Initiator shall be in powder form. Use hand or finger to form it in powder form. **Not sieve.**
Grind the main charge with care.

Fill the bomb very carefully properly. There should be no gap in the bomb. A gap would be very dangerous due to the friction in the initiator giving it the shock to blast. If there is a little space fill it with cotton or iron pieces.
Those pieces of iron used in the bomb. If they are big, make a hole in it, and fill the poison into it. Close this hole with candle crystals or heat the pieces of iron, dip them in poison and use in the bomb.
Throw the bomb with the help of a stick. Tie the bomb with the stick and swing it then throw. This is safer than a sudden jerky throwing motion.

10. Main Charge: Potassium Chlorate ($KClO_3$)

10.1 $KClO_3$ mix Mixtures using Potassium Chlorate

Potassium Chlorate	Nitro Benzene
$KClO_3$	$C_6H_5NO_2$
80%	20%

Mix the Potassium Chlorate ($KClO_3$) with the Nitro Benzene. First we make both of the substances. To make the Potassium Chlorate ($KClO_3$), we will use the improvised matchstick method as described in 9.1.1 Potassium Chlorate (KClO2) on page 26.

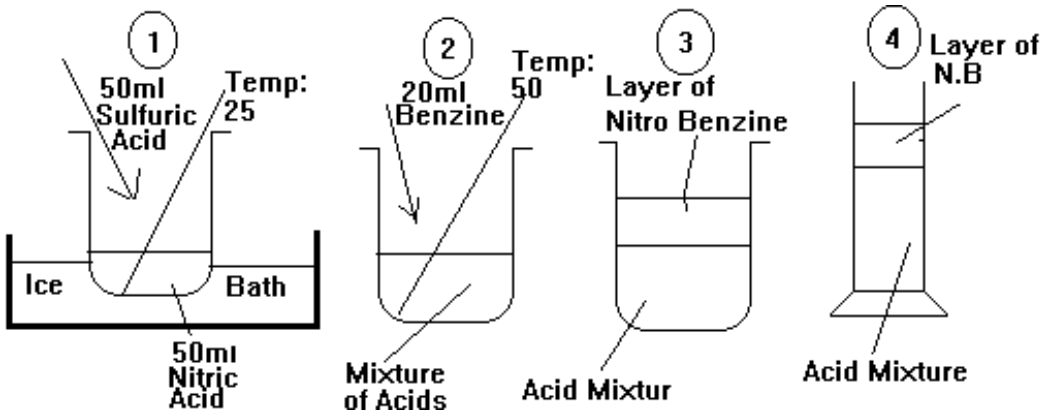
Nitro Benzene will be prepared using the following method. We can also get Nitro Benzene from the chemist shop in the form of Mari Ban Oil, which is used to cure the children from the worms in the stomach. To prepare the Nitro Benzene in the laboratory, we need the following substances.

Sulphuric Acid (H2SO4)	Nitric Acid (HNO3)	Benzene (C6H6)
50ML	50ML	20ML

10.1.1 Preparation of Nitro Benzene

1. Prepared the ice pot for the mixing of the two acids
2. Put 50ML of HNO3 in a beaker and put it in the ice pot.
3. Add H2SO4 gradually into the HNO3. Keep the temperature less than 25°C to prevent breaking. If temperature increase, there is a danger of fumes.
4. After mixing the 50ML of H2SO4 in the HNO3, remove the beaker from the ice pot and raise the temperature to 50°C.
5. Add the 20ML of Benzene to the solution. Make sure that the temperature is 50°C at mixing time. NB. Benzene is petrol with 6 atoms. Ordinary petrol has 8 atoms.
6. You will find a layer of Nitro Benzene at the top of the whole mixture.
7. Separate it by sucking with a dropper after you put the mixture in a thin cylinder.

Figure 17: Preparation of Nitro Benzene -done



10.1.2 The newer and better method of preparing Nitro Benzene

For this we will mix Benzene with an Acid mix.

Benzine	Acid mix
23 gm	65 gm

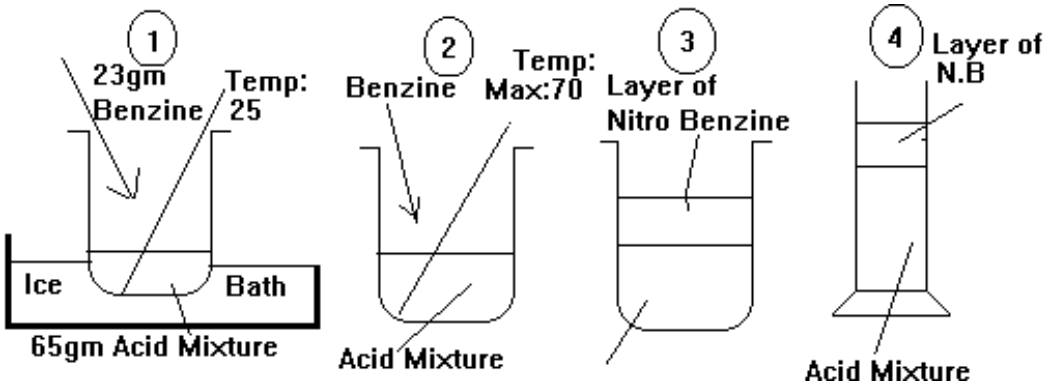
The acid mix consists of the following substances:

H2SO4	HNO3	Distilled water
58%	28%	14%

10.1.2.1 Preparation

1. Take 65 gm of acid mix and drop it to below 25°C.
2. Take 23 gm of Benzine and mix it in the acid mix drop by drop with continuous string and take the temperature up to but not above 70°C.
3. When all the Benzine has mixed in the acid, stir it for some time and separate it with the help of a dropper or syringe.
4. This will be our Nitro Benzine but with impurities.

Figure 18: Preparing a better Nitro Benzine



10.1.2.2 Purification

Nitro Benzine still has acid in it.

1. Add Sodium Hydroxide (NaOH) 3% to 3.5% continuously stirring it.
2. Check it with PH paper. When the PH paper becomes green, separate it with a dropper.
3. This will be our pure Nitro Benzine. In our experience, it is very good and powerful and better than the previous one.

10.1.3 Properties of KClO3 with C6H5NO2

1. It is mouldy mix with water itself with low sensitivity.
2. It has a medium power of explosion and can be used with normal detonators, it can also be used as the alternative to dynamite.
3. For the experience of our teacher hat it has gone through a steel, making a hole of 20cm diameter in the 4mm thick steel with 100gm charge. So for it is proof that it is stronger than TNT because TNT cannot make a hole in a steel shield.
4. Nitro Benzine is a poison and it has gone through the skin, wash it with a lot of water if it touches any part of your body.
5. This mix is classed as stronger than the mix of the chlorate which can be made and is known by us.
6. This mix (Nitro Benzine + Potassium Chlorate) also be explode with the fuse only if the ratio are modified are as follows:

1. KClO3	1. Sugar	1. Nitro Benzine
2.	2.	2.

This will be detonated with a fuse.

10.2 $KClO_3$ mix Potassium Chlorate ($KClO_3$) + Nitro Benzine ($C_6H_5NO_2$)

Potassium Chlorate ($KClO_3$)	Nitro Benzine ($C_6H_5NO_2$)
80 gm	20 gm

1. Weigh 80gm of KClO3, then sieve it well then put it in a plastic or iron container.

2. Weigh 20gm of Nitro Benzine. (You can calibrate the volume because it you are not sure about the weight)??
3. Drop the Nitro Benzine in the KClO3 with the dropper spreading it to cover the surface area, then leave it for 3-5 minutes to soak into the Potassium Chlorate ($KClO_3$) without stirring.

Important

1. After dropping the liquid (Nitro Benzine) on the KClO3, you should not move, shake or stir the solution. To make sure the good distribution of liquid in side the KClO3 solution.
2. Keep this mixture in an air tight plastic or steel container because to prevent the liquid of the solution.
3. For this the detonator will be 3gm of fulminate or azide, if we are using the acetone or Hexamine, we will use 6gm of them.
4. Make special precaution before lightening the mix because Nitro Benzine catch fire very quickly.

10.2.1 Results

10.2.1.1 Experiment 1: Abdul-Aziz (7-12-95)

Potassium Chlorate ($KClO_3$)	40gm
Nitro Benzine ($C_6H_5NO_2$)	10gm (not ml)
Detonator	Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$ next to Lead Azide (PbN_6)

I put the Potassium Chlorate ($KClO_3$) in the container first and then used a dropper to spread the Nitro Benzine ($C_6H_5NO_2$) evenly over the surface area of the Potassium Chlorate ($KClO_3$). Worked just fine.

10.3 $KClO_3$ mix Mixture of KClO3 + Sulphur

KClO3	Sulphur
Ratio 11:	1

10.3.1 Preparation

Grind both substances separately and then sieve them and mix them very well and after mixing, sieve them again.
This mixture will also be used for impact bombs. This bomb will be prepared as shown in Figure 19: Impact bomb.

Figure 19: Impact bomb -done

10.3.2 Notes for impact bomb

1. You must put steel pebbles on the both side of the steel container to ensure the starting of the bomb.
2. **Make sure that you have left a gap between the bomb.**
3. After sealing the bomb, shake it little to mix the pebbles with the charge or mixture.
4. Make sure that the target place is in a solid shape so for there will be full chances of explosion of this bomb.

10.3.3 Results

10.3.3.1 Experiment 1: Abdul-Aziz (6-12-95)

Details:

1. Fuse = White powder (Sawdust version).
2. Detonator = Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$
3. Main charge = 88gm of Potassium Chlorate ($KClO_3$) + 8gm of Sulphur (S).

I did not create an impact bomb as the instructions say. I created a stationary bomb to be detonated by a detonator to see if this works with this main charge. The bomb did not explode. Only the detonator did. We concluded that the detonator wasn't strong enough to detonate this charge as it was designed for impact.

10.3.3.2 Experiment 2: Abdul-Aziz (6-12-95)

Details:

1. Fuse = White powder (Sawdust version).
2. Detonator = 50% Lead Azide (PbN_6) and 50% Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$. These 2 initiators were not mixed. The Lead Azide (PbN_6) was placed in the side of the detonator near the charge. The Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$ was placed next to the fuse.
3. Main charge = 88gm Potassium Chlorate ($KClO_3$) + 8gm Sulphur (S).

I changed the detonator to include Lead Azide (PbN_6) as we thought that this would cause enough shock waves to detonate the main charge. Lead Azide (PbN_6) is more powerful than Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$, but a detonator containing both is more powerful than Lead Azide (PbN_6) on it's own.

The bomb still didn't explode. My teacher concluded that this bomb only explodes as an impact bomb, not as a stationary bomb. He also told me that it definitely works very well as an impact bomb as he has tested it himself.

10.3.4 New method of impact bomb

Use any of the powerful mix 90% and add 10% of lead azide on both sides with steel pebbles.
This will work very well and with surety.

NB. Powerful mix here means, that we can choose out of KClO3, ammonium nitrate or urea nitrate.

10.4 $KClO_3$ mix KClO3 + Diesel or Kerosene or Sugar mixture

This is the main charge of the Chlorate:

KClO3	Diesel or Kerosene or Sugar
Ratio 9:	1

This procedure of making bomb is the same as the Nitro Benzine + KClO3, but there is difference in the quantity so to prepare the bomb. Take KClO3, grind and fine it then put it in a steel container and drop the diesel or kerosene on it, then put a detonator in it.

NB. There will be double the quantity of initiator in the detonators.

10.4.1 Properties

It is not sensitive, that is why it needs detonators.
It is less powerful than Nitro Benzine bomb by 1/4.
IT is recommended that diesel and kerosene bomb charge always be packed in an iron container.
It is used also as an anti-personal.
For sugar, it is very necessary that it will grind and mix well with the CLO3. It is not grind and mix well. It will not explode.

Important: Also with some modification we can use explode the mixture without detonators. The quantity and the substance will be as follows.

KClO3	Sugar	Aluminium powder
Ratio 45:	5:	3

This mixture has no need of detonator.
It is very important that grind and sieved all the substance very well.

10.5 $KClO_3$ mix KClO3 mixture with Sulphur, Carbon, Potassium Nitrate, can use engine oil and Magnesium

It is also main charge of potassium chlorate
NB. Any mixture in which we use engine oil, we can use Nitro Benzine instead of the oil for better results.

10.5.1 Formula

KClO3	KNO3	S	C	Engine Oil	Mg
Ratio 78:	12:	6:	4:	4:	10

You have to make sure that the substance must be very dry before used in the mixture. You can explode it with or without detonators. In our experiment we have used the same quantity of the substance but double the oil. It gave us explosion with a lot of smoke. **So it is good smoke bomb also.**

10.6 $KClO_3$ mix (Benzine, Sawdust)

It is the 7th main charge potassium chlorate.

KClO3	Benzine	Sawdust
88.5%	8%	3.5%

NB. Dry it completely after mixing of Benzine in the mixture of sawdust and KClO3. It can be exploded only with the help of detonators and must be confined in a strong iron or steel container.

10.7 1.5 TNT. $KClO_3$ mix (Vaseline)

It is the 8th main charge of KClO3 with Vaseline.

KClO3	Vaseline
88%	12%

New research is more powerful:

KClO3	Ghee
88%	12%

It is also called plastic explosive as it can be moulded to any desired shape. It would not be detected on any airports or anywhere, so many persons are used to explode the aeroplane.

If you add 8 drops of Nitro Benzine, then the power = 1.5 TNT.

10.7.1 Important notes about the preparation of this mixture

After grinding and sieving the KClO3 well kneed the Vaseline (like you kneed the dough to make bread).
This mixture will be exploded very violently with detonators.

10.7.1.1 Results

10.7.1.1.1 Experiment 1: Abdul-Aziz (6-12-95)

Details:

Potassium Chlorate ($KClO_3$)	88gm
Ghee	12gm
Detonator	Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$

Everything worked fine.

10.7.2 Special notice about these mixtures??

If we will drop some drop of Nitro Benzine (5-6 drops) or 10 drops of the used engine oil, it will give us more explosive.
If this mixture will be checked in airports it is very difficult to find it with a deductive machine.
We can also use the following substances with the ratio given below.

KClO3	Vaseline	Aluminium powder	Magnesium
70%	12%	7%	11%

It was tried and it exploded with very strong sound and with a big light.

10.8 1.5 TNT. $KClO_3$ mix KClO3 with coffee, sugar and aluminium powder

It is the 9th main charge of KClO3. It has also 2 kinds.

$KClO_3$	coffee	sugar	aluminium powder
70%	10%	5%	15%

Before mixing all these substances, grind and sieve them well. Power = 1.5 TNT.

The mixture of KClO3 with TNT, Aluminium powder and Vaseline and sugar

KClO3	TNT	Aluminium powder	Vaseline	sugar
60gm	10gm	15gm	10gm	10gm

Both the above mixtures might be exploded with or without detonator and with the fuse also. These mixtures can shatter that object an which it was charge. It mean it will have such a force that it can broke all the part of the object into pieces on which it is applied.

10.8.1 Tests

Mujahid 1	KClO3	NH4NO3	KMnO4	Al	S	C	Sawdust
very strong	45gm	25gm	10gm	10gm	15gm	10gm	10gm
Mujahid 2	KClO3	S	C	Al			
very strong	50%	20%	25%	5%			
Mujahid 3	White powder made with Sawdust	Mg powder					
very strong	75%	25%					

10.9 $KClO_3$ mix

KClO3	KMnO4	Al powder	engine oil or Benzine	Sugar	S	C
Ratio 6:	3:	3:	1:	2:	1:	1

It can be exploded with or without detonator with fuse also, so this mixture will be in iron container or steal container.

10.10 $KClO_3$ mix

KClO3	Sodium Chlorate NaClO3	Al powder	Dirty engine oil	Sugar	S	C
Ratio 6:	3:	3:	1:	1:	1:	1

This mixture works only with detonator, because it needs a shock wave. Sodium Chlorate is not very sensitive.

10.11 $KClO_3$ mix

KClO3	Ammonium Nitrate NH4(NO3)	Al powder	Dirty engine oil	Sugar	S	C
Ratio 6:	3:	3:	1:	2	1:	1

This mixture works only with detonator, because it needs a shock wave.

10.12 $KClO_3$ mix

KClO3	Sodium Nitrate NaNO3	Mg powder	Al powder	Dirty engine oil	Sugar	C
Ratio 6:	3:	3:	1:	1:	1	1

This mixture works only with detonator, because it needs a shock wave.

10.13 $KClO_3$ mix

KClO3	Sodium Chlorate NaClO3	Al powder	Dirty engine oil	Sugar	S	C
Ratio 6:	3:	1:	1:	1:	1:	1

This mixture works only with detonator, because it needs a shock wave.

10.14 $KClO_3$ mix

KClO3	Sodium Nitrate NaNO3	Al powder	Dirty engine oil	Sugar	S	C
Ratio 6:	3:	1:	1:	2:	2:	1

This mixture works only with detonator, because it needs a shock wave.

10.15 $KClO_3$ mix Very strong Potassium Chlorate mixture

KClO3	Nitro Benzine $C_6H_5NO_2$	BaNO3	TNT	NH4(NO3)	C
40gm	30gm	30gm	30gm	47gm	2gm

This mixture works only with detonator, because it needs a shock wave.

10.16 $KClO_3$ mix Very strong Potassium Chlorate mixture

KClO3	Nitro Benzine C6H5NO2	Coffee	Mg Powder
86gm	30gm	9gm	45gm

This mixture works only with detonator, because it needs a shock wave.

10.17 Burning charge of KClO3

KClO3	Sugar	Dirty engine oil

Ratio 3:	1:	1

It is burning charge which needs fuse of yellow or white powder to start its burning.
NB. All burning charge needs only Time Fuse.

10.18 Burning and Exploding charge

KClO3	Sugar	S	Al powder
Ratio 3:	1:	1:	1

This charge will explode with or without fuse.

10.18.1 Results

10.18.1.1 Experiment 1: Abdul-Aziz (6-12-95)

Details:

Potassium Chlorate ($KClO_3$)	50gm
Aluminium (Al)	16.5gm
Sugar	16.5gm
Sulphur (S)	16.5gm

Detonator = Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$
Worked fine. Remember to mix the Potassium Chlorate ($KClO_3$) in last always.

10.19 Burning charge

KClO3	C	S	Mg powder	Iron powder	Al powder
Ratio 3:	1:	1:	1:	1:	1

This charge gives a large amount of light.

10.20 Turning Potassium Chloride into Potassium Chlorate? Chlorite?

This doesn't work. Need to find what the mistake is.
Potassium chlorate is very important for exploding materials. It is used to oxidising mixtures

Properties

1. It is in the shape of white crystals.
2. It is does not get much effect from humidity

Steps of Preparation

1. Put one half cup of KCl (Potassium Chloride) with 3 litres of water in the pot
2. Put 2 spoons of Sulphuric Acid (H_2SO_4) in it and stir it well

3. Make two strips of wood, with the size and dimensions are as follow:
   5 cm x 0.3 cm x 3 cm
4. Tie up the 2 lead poles with the wooden strips and connect them with terminals but without current.

NOTE: Make sure there is no current leakage.

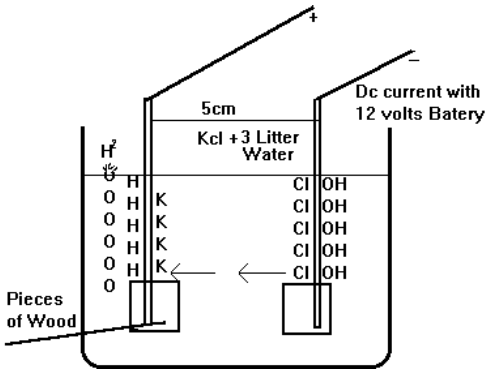
5. Now turn on the button of the transformer of 12 volts (If we are using the car battery of 12 volts, Start the car after every 1 or 2 hours)
6. Now leave this apparatus on working for 24 to 36 hours and if the water is dry refilled it again.
7. After 24 to 36 hours take out the solution and filter it.
8. Boil this water until to dry.
9. Collect the salt, this is Potassium Chlorate. $KClO_3$

SPECIAL NOTE

Figure 20: 9.23 Turning Potassium Chloride into Potassium Chlorate? Chlorite? -done

All kind of chlorites can be changed into chlorate with this method.
Simple Equation.

$$KCl + 3\,H_2O \xrightarrow{\text{current}} KClO_3 + 3H_2$$



11. Sodium Nitrate ($NaN0_3$)

Name	Quantity
Salt (NaCl)	58.5 gm

Nitric Acid	63 gm

There are 2 types of Salt:
1. Eating.
2. Pure.

The pure salt is better and is available as a chemical.

11.1 Preparation

1. Dissolve salt completely in a small amount of water.
2. Pour all of Nitric Acid at once into salt mixture.
3. Boil solution in hot bath. White smoke will appear as the Nitric acid will be evaporating. When the Nitric acid and the water has evaporated, yellow crystals will be found at bottom of beaker.
4. Dry the crystals using a fan etc.

S.A. Maybe it might be good idea to clean and filter with Sodium Carbonate (Na_2CO_3) and/or water.

11.2 Al Mix

Name	Quantity
Sodium Nitrate	80%
Al powder	20%

12. Main Charge: Ammonium Nitrate (NH_4NO_3) & Urea Nitrate ($(NH_2)_2C(NO_3)_2$

12.1 Ammonium Nitrate (NH4NO3)

The Ammonium Nitrate is considered as a substance that slows down the reaction, therefore it must be used with the suitable activator such as yellow powder or white powder or sugar+potassium chlorate 1/3 respectively.

These are placed around the detonator according to the weight of the main charge. It observes humidity easily so before using you must give it hot sand bath for complete drying.

Power = 0.56 TNT. This is useful for large bombs as it is found ready made in the market. Just requires mixing. To make fine powder from Ammonium Nitrate, you can use a blender with no safety problems.

12.2 NH4NO3 Mixtures

All mixtures will explode with detonator and yellow or white powder from sawdust. The powder is called the booster.
If the Nitrogen in the NH4NO3 is 30-33% then you need 5-10gm of booster.
If the Nitrogen in the NH4NO3 is 20-25% then you need 15-20gm of booster.

12.2.1

Very strong mixture

NH4NO3	Al powder	S
Ratio 8.5:	1:	0.5

12.2.2

NH4NO3	Urea Nitrate	Al powder
6gm	2gm	1gm

12.2.3

NH4NO3	Urea Nitrate	Al powder
3gm	3gm	1gm

12.2.4

NH4NO3	Urea Nitrate	Al powder
2gm	4gm	1gm

12.2.5 Ammonal

NH4NO3	Al powder
78gm	54gm

This gives us much power and very strong light and can be used as a light bomb.

12.2.6 Earthquake

NH4NO3	Al powder
81%	19%

This is the most powerful Ammonium Nitrate mixture. It's power = 2 TNT. It will produce a very strong light, spark, and will shake the earth.

12.2.7

NH4NO3	TNT	Al powder
89%	10%	1%

It can penetrate through steel and make a hole in it.

12.2.8

NH4NO3	TNT	Ammonium Oxalate C2H8N2O4
89%	10%	1%

Large sound but weaker in strength

12.2.9

NH4NO3	TNT	C	Al powder
60%	15%	7%	18%

12.2.10 Nescafe

NH4NO3	Coffee	Al powder
6gm	2gm	2gm

Easy and quick to prepare. This is another powerful mixture. It's power = 1.4 TNT.

12.2.11 A.N.F.O.

NH4NO3	Diesel
9gm	1gm

Easy to prepare. Dry it in the sun. Sieve and grind NH4NO4 very well. The speed of explosion is 3400 M/sec.

12.2.12

NH4NO3	Woodsaw or sugar
9gm	1gm

Double the size of the detonator for this one. Woodsaw/sugar is not sensitive?

12.2.13

NH4NO3	Al powder	C
80%	15%	5%

12.2.14

(Pb)2NO3	TNT
72%	28%

It is a very strong mix and it will explode with a detonator.

12.2.15

BaNO3	TNT
60%	40%

It is a very strong mix and it will explode with a detonator.

12.2.16

NH4NO3	TNT
40%	60%

It is a very strong mix and it will explode with a detonator.

12.2.17 Sound blaster

Name	Quantity
NH4NO3	85%
Al powder	10%
Sawdust	5%

Power = 0.5 TNT. This creates a LOT of sound. Useful for attention grabbing.

12.3 Other special mixtures

12.3.1 Black powder

KNO3	S	C
75%	10%	15%

This is similar to the black powder used in bullets and big bombs.

12.3.2

Black powder	Mg powder
50%	50%

This will explode with a detonator and yellow/white around it.

12.3.3

Black powder	Mg powder
80%	20%

This will explode with a detonator and yellow/white around it.

12.3.4

KMnO4	Al powder
60%	40%

This will explode with a detonator and yellow/white around it.

12.3.5

KMnO4	Sugar	Al powder
2 gm	1 gm	1 gm

This will explode with a detonator and yellow/white around it.

12.4 Urea Nitrate $(NH_2)_2C(NO_3)_2$

12.4.1 Properties

1. It is white crystals dissolved in water and it does not explode if it is humid.
2. It can explode alone or in a mixture, but it is better to use a mixture.

12.4.2 Preparation

Urea	Nitric Acid (HNO_3)	H_2O (water)
100gm	135ml	150ml

1. Put 100gm of Urea into 150ml of Water and dissolve thoroughly.
2. After fully dissolving, add 135ml of Nitric Acid gradually. Stir continuously.
3. You will see the immediate formation of white crystals (Urea Nitrate).
4. Stir for another 2 minutes.
5. Leave this to crystallise for 2 hours, until it cools down and is fully crystallised.
6. Filter it and leave it in the air to dry.
7. Grind it, sieve it well and store for the use as a main charge.

12.4.2.1 Results

12.4.2.1.1 Experiment 1: Abdul-Aziz (7-12-95)

Urea (Fertiliser)	50gm
Water	75ml
Nitric Acid (HNO_3)	67.5ml

Dissolving the Urea into the water took about 15 minutes. The solution was a pale white colour and freezing cold (approx. -5°C.) because of the Urea. After adding Nitric Acid (HNO_3) and stirring, the solution became warm (approx. 35-40°C.). The solution was now a pure white colour and the texture was creamy like butter milk. The heat gradually faded with time.

This preparation worked just fine. 50gm of Urea Nitrate $(NH_2)_2C(NO_3)_2$ was created.

12.4.3 Improvised method of getting Urea

1. Boil 10 cups of human urine, until only 10% is left (i.e. 1 cup).
2. Filter the solution.
3. Add 1/3 cup of HNO3 and leave this mixture for 2 hours for full crystallisation.
4. Filter again and leave in air to dry.
5. This is our urea nitrate.

12.4.4 Urea Nitrate Mixtures

All mixtures will explode with detonator and yellow/white powder. Mixtures 4, 5 and 6 are stronger than TNT.

12.4.4.1

NH4NO3	Urea Nitrate	Al powder
6 gm	2 gm	1 gm

12.4.4.2

NH4NO3	Urea Nitrate	Al powder
3 gm	1 gm	1 gm

12.4.4.3

NH4NO3	Urea Nitrate	Al powder
2 gm	4 gm	1 gm

12.4.4.4 Urea Nitrate mixture 4

Urea Nitrate	Al powder
4 gm	1 gm

12.4.4.4.1 Results

12.4.4.4.1.1 Experiment 1: Abdul-Aziz (7-12-95)

Urea Nitrate	40gm
Aluminium (Al) powder	10gm
Booster	White powder (Sawdust version)
Detonator	Hexamine Peroxide $(C_6H_{12}N_4)_2O_2$ and Lead Azide (PbN_6)

I didn't grind and sieve the fresh crystals of the Urea Nitrate just to test the result. The Aluminium (Al) powder was already finely grinded. The final bomb was first packaged completely. When the hole was made for the detonator to fit into, my teacher placed 10gm of White powder (Sawdust version) into the hole and filling the top of the container. He was only supposed to use about 5gm but he was experimenting. When the detonator was placed in the bomb, it was completely surrounded by the White powder (Sawdust version) which acted as a booster for the detonator.

The bomb exploded, but wasn't very strong. The reason for this was because the Urea Nitrate wasn't grinded properly!

12.4.4.5

Sulphur	Urea Nitrate	Al powder
2 gm	6 gm	2 gm

12.4.4.6

Coffee	Urea Nitrate	Al powder
1 gm	4 gm	1 gm

12.5 Nitro Urea

Nitro Urea is prepared by using Urea Nitrate. It is more powerful than Urea Nitrate. It is as powerful as Nitro Glycerine and Nitro Benzine.

12.5.1 Properties

1. White crystals dissolved in water.
2. Melting point is 146-150°C.
3. It can be stored for many years.
4. It will be stored in air tight glass containers.
5. When any alkali mix with it disintegrate into water, ammonia, nitric oxide, Byrite and Syrthic acid.
6. It's power is equal to 2 TNT.

12.5.2 Formula

Dry Urea Nitrate	H2SO4	Water

20 gm	30 gm	100 ml

12.5.3 Preparation

1. Mix 20gm Urea Nitrate in 30gm H2SO4 below 0°C and mix it very well. It will be like milky liquid.
2. Add 100ml of cool water. It will become like yoghurt.
3. Filter it and put it in the sun for sometime without washing.
4. Don't dry it completely. When it is like paste (it has moisture), put it in a beaker.
5. Add some boiling Ethyl Alcohol (C2H5OH) with continuous string. Dissolve the Nitro Urea in the boiling Ethyl Alcohol.
6. Cool it down with an ice bath. It will form white crystals. This is our pure Nitro Urea.
7. Filter it and wash it with Ethyl Alcohol.
8. Dry it in sunlight.
9. This is a very powerful explosive.

13. Liquid Mixtures

13.1 Nitro Glycerine ($C_3H_5(ONO_2)_3$)

These materials are usually much more powerful with low sensitivity compared with initiated and activated materials. E.g. Nitro-glycerine and it's mixtures called dynamite.

13.1.1 Properties

1. As commercial product it is light brown and cream oily colour. When it is pure it is colourless.
2. Usually it freezes at temperature of 11-13°C.
3. It does not dissolve in water but it dissolves in Alcohol (C_2H_5OH), toluene, chloroform and Nitro Benzine ($C_6H_5NO_2$).
4. It is brought back by the addition of water in the liquid.
5. It also dissolves in olive oil.
6. It's specific density is 1.6.
7. It disintegrates by adding Sulphuric acid (H_2SO_4).
8. It is a good solvent for other substances.
9. It will explode at 180°C.
10. It explodes at high pressure.
11. Light and rays disintegrate it.
12. It disintegrates at 75°C.
13. It is sensitive to impact.
14. It can be exploded by a bullet shock and friction of sharp edges of tools or the edges of china clay utensils.
15. Rate of explosion. In liquid form it is 1000 to 8000 M/sec. In solid form it is 8000 M/sec.

16. For storage keep it under water by the ratio 3:1. 3 for water and 1 for Nitro Glycerine ($C_3H_5(ONO_2)_3$).
17. It is a strong poison. Effects blood pressure. Causes headache, pain, vomiting and souring of legs. The patient must be kept in fresh air and given caffeine injection with Sodium Benzonate injection or offer Amphetamine to drink.
18. People working frequently with it are effected like narcotics.
19. Pure Nitro Glycerine ($C_3H_5(ONO_2)_3$) with cool storage helps long life dynamites. Do not store in hot weather as it is dangerous. Room temperature 20°C is good for storage.
20. In fresh form it is stronger.
21. To prepare Nitro Glycerine ($C_3H_5(ONO_2)_3$) we get it or prepare personally.

13.1.2 Preparation of Glycerine ($C_3H_5(OH)_3$)

1. It is prepared by heating cooking oil or ghee at 55°C then add NaOH or KOH in concentrated form.
2. Stir it continuously till the mixture splits into 2 parts.
3. The liquid becomes fern?? And float on liquid the top fern is used for making shape and the liquid will be Glycerine ($C_3H_5(OH)_3$).

Note: NaOH or KOH added continue till separate shapes are formed.

13.1.3 Preparation of Nitro Glycerine ($C_3H_5(ONO_2)_3$)

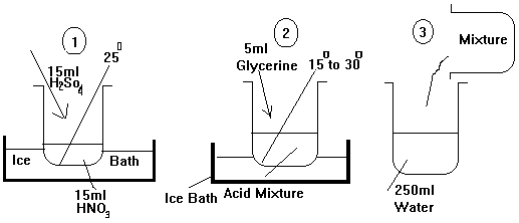
Name	Quantity
Glycerine ($C_3H_5(OH)_3$)	5 ml
Nitric Acid (HNO_3) conc. 65-85%. 85% is best	15 ml
Sulphuric Acid (H_2SO_4)	22.5 ml
Water	250 ml

1. Put the 15ml of Nitric Acid (HNO_3) in a beaker and place it in an ice pot. Bring the temperature down to 5°C.
2. Add 22.5ml Sulphuric Acid (H_2SO_4) gradually in it, stirring continuously. Keep temperature below 25°C.
3. Reduce the temperature of the mixture to 12°C.
4. Add the Glycerine ($C_3H_5(OH)_3$) slowly with continuous stirring. During the process the temperature is best between 10-20°C. It will become dangerous at 30°C.
   Note: If by chance the temperature raises to 50-60°C, drop the whole mixture in the ice pot.
5. Stir this solution for 10-15 minutes.
6. Now add the whole mixture at once to a beaker of 250ml cool water. Not vice versa.
7. The formation of Nitro Glycerine ($C_3H_5(ONO_2)_3$) at the bottom of beaker.
8. Get rid of excess water.
9. At this stage, purification of Nitro Glycerine ($C_3H_5(ONO_2)_3$) produced is unsafe and unpreferable with high acidity, so to purify it we add 2% concentrated Sodium Carbonate (Na_2CO_3) until the colour of PH paper changes blue or green. When there is no more acid, the solution will not fizz when adding sodium carbonate.

10. You should get 5 ml Nitro Glycerine ($C_3H_5(ONO_2)_3$).
11. You can store this in 15 ml of water if you want to.

Note: If we are not planning to explode it we must change it into inactive form of explosive material called Dynamite.

Figure 21: Preparation of Nitro Glycerine ($C_3H_5(ONO_2)_3$) -done



13.1.4 Dynamite

13.1.4.1 Properties

1. It is a soft substance, with different in colour. Colour differs due to absorbing material of Nitro Glycerine ($C_3H_5(ONO_2)_3$).
2. It's effect is lost by long storage.
3. It can be exploded by high impact. Exploding speed is 4-7 M/sec.??
4. It consists of generally these substances.
5. Woodsaw.
6. Oxidiser, i.e. Sodium Nitrate ($NaNO_3$).
7. Acid reducer, Sodium Carbonate (Na_2CO_3).
   Note: Addition of Sulphur (S) or Salt (NaCl) increases it's effect.
8. Specific density is 1.2 to 1.6.

13.1.4.2 Preparation

Name	Quantity
Nitro Glycerine ($C_3H_5(ONO_2)_3$)	15%
Sodium Nitrate ($NaNO_3$)	62.9%
Sawdust	21.2%
Sodium Carbonate (Na_2CO_3)	0.9%

1. Collect all the substances according to the weight and sieve them well.
2. Add Sodium Nitrate ($NaNO_3$) and Sawdust and then Sodium Carbonate (Na_2CO_3).
3. Start adding Nitro Glycerine ($C_3H_5(ONO_2)_3$) drop by drop in it.
4. Mix well and store in a container.

This is 0.7 TNT *(AS)*.

13.1.4.3 Storage

At 15 to 40°C Nitro Glycerine ($C_3H_5(ONO_2)_3$) will be separated from Dynamite and it can be dangerous. At a very low temperature (i.e. 0°C), it is very dangerous.

13.1.5 Mixtures of Nitro Glycerine ($C_3H_5(ONO_2)_3$)

When making bombs, all Nitro Glycerine measurements are taken as gm, not ml. This rule applies generally?

13.1.5.1

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	93% gm
Nitro Cellulose	7% gm

Power is second only to Astrolight. Good only for 3 days. (12-3-96) AK.
Power is 4 TNT *(AS)*.

1. Carefully soak Nitro Glycerine into the small pieces of Nitro Cellulose.

DIY job, is just to place Nitro Cellulose in container and pour the Nitro Glycerine on top. It should soak through. Have to test if this is good. SA.

13.1.5.2

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	40%
Nitro Sawdust	60%

Nitrate sawdust using same technique as with Nitro Glycerine. Most powerful according to MA, but listen to AK's advice first.

13.1.5.3

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	80% gm
Sawdust	20% gm

1. Put sawdust into container.
2. Add Nitro Glycerine on top. Let it soak into sawdust.

This is 2.5 TNT *(AS)*. Don't store it.

13.1.5.4

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	75%
Nitro Cellulose	5%
NH4NO3	15%

This is 3.5 TNT *(AS)*. Don't worry about not 100% being completed in formula.

13.1.5.5

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	32%

Sodium Nitrate ($NaNO_3$)	28%
Sawdust	10%
Ammonium Oxalate?? ($C_2H_8N_2O_4$)	29%

13.1.5.6

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	35%
Sodium Nitrate ($NaNO_3$)	237
Sawdust	27%
Ammonium Oxalate ($C_2H_8N_2O_4$)	1%

13.1.5.7 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	26%
Potassium Nitrate (KNO_3)	33%
Sawdust	41%

13.1.5.8 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	40%
Sodium Nitrate ($NaNO_3$)	35%
Sawdust	15%

13.1.5.9

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	24%
Potassium Nitrate (KNO_3)	9%
Sodium Nitrate ($NaNO_3$)	56%
Sawdust	9%
Ammonium Oxalate ($C_2H_8N_2O_4$)	2%

13.1.5.10

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	33%
Potassium Nitrate (KNO_3)	27%
Sawdust	10%
Nitro Cellulose	1%
Ammonium Oxalate ($C_2H_8N_2O_4$)	29%

13.1.5.11

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	47%
Starch	50%
Nitro Cellulose	3%

13.1.5.12 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	30%
Sodium Nitrate ($NaNO_3$)	22.3%
Sawdust	40.5%
Potassium Chlorate ($KClO_3$)	7.2%

13.1.5.13 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	18%
Sodium Nitrate ($NaNO_3$)	70%
Sawdust	5.5%
Potassium Chlorate ($KClO_3$)	4.5%
Chalk	2%

13.1.5.14 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	26%
Barium Nitrate ($BaNO_3$)	40%
Sawdust	32%
Sodium Carbonate (Na_2CO_3)	2%

13.1.5.15

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	23%
Potassium Nitrate (KNO_3)	27.5
Barium Nitrate ($BaNO_3$)	4%
Sawdust	37%
Ammonium Oxalate ($C_2H_8N_2O_4$)	8%
Calcium Carbonate ($CaCO_3$)	5%

13.1.5.16 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	12%
Nitro Cellulose	0.5%
Ammonium Nitrate (NH_4NO_3)	87.5%

13.1.5.17 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	24%
Nitro Cellulose	1%
Ammonium Nitrate (NH_4NO_3)	75%

13.1.5.18 Tested by M.Ahmed

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	9.5%
Nitro Cellulose	0.5%
Ammonium Nitrate (NH_4NO_3)	59%

Sawdust	6%
Ammonium Oxalate ($C_2H_8N_2O_4$)	10%
Sodium Chlorate?? ($NaCLO_3$)	15%

13.1.5.19

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	71%
Nitro Cellulose	4%
Ammonium Nitrate (NH_4NO_3)	23%
Carbon (C)	2%

13.1.5.20

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	75%
Nitro Cellulose	5%
Potassium Nitrate (KNO_3)	15%
Woodsaw	5%

13.1.5.21

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	29%
Nitro Cellulose	1%
Ammonium Nitrate (NH_4NO_3)	70%

13.1.5.22

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	29%
Nitro Cellulose	1%
Ammonium Nitrate (NH_4NO_3)	65%
Potassium Nitrate (KNO_3)	5%

13.1.5.23

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	73.4%
Nitro Cellulose	13.3%
Ammonium Nitrate (NH_4NO_3)	13.3%

13.1.5.24

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	79%
Nitro Cellulose	5%
Ammonium Nitrate (NH_4NO_3)	15%

13.1.5.25

Nitro Glycerine ($C_3H_5(ONO_2)_3$)	75%
Nitro Cellulose	5%

Ammonium Nitrate (NH_4NO_3)	15%
Woodsaw	5%

13.2 Nitro Methane (CH_3NO_2)

It explodes like Nitro Glycerine ($C_3H_5(ONO_2)_3$). We can make a bomb from it. It can be used in the cracks of the walls also in a liquid form.

13.2.1 Properties

1. It is a liquid similar to Nitro Glycerine ($C_3H_5(ONO_2)_3$). It can be used in the same methods as Nitro Glycerine ($C_3H_5(ONO_2)_3$) is used. It can be simply poured into any area (not glass as the edges have too much friction causing an explosion) and then detonated with a detonator. E.g. In the crack of a wall.
2. It is a very powerful explosive.
3. When mixing with other substances, be extremely careful.
4. It's purity can be determined by it's colour. The purer it is, the more powerful the explosion!
5. It will poured in the cracks of the wall, iron sheets, concrete wall also and it can be exploded easily.
6. It's strength is 1.2 TNT as confirmed by AK. Previous notes said it as 25 TNT., but this is wrong!
7. It has an exploding speed of 6200 M/sec.
8. It can be exploded by a standard detonator (i.e. with activator such as Azides, Peroxides, RDX).

13.2.2 Defects

Easily evaporated at room temperature. To avoid this, we store it under water in liquid form.

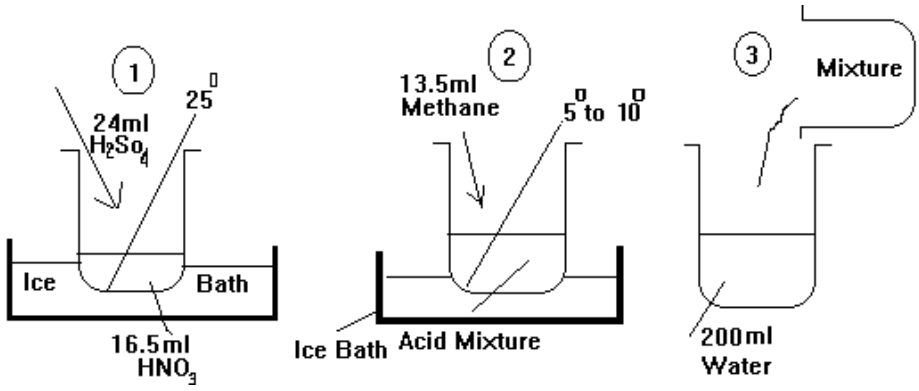
13.2.3 Preparation

Methanol (CH_3OH)	Nitric Acid (HNO_3)	Sulphuric Acid (H_2SO_4)	Cool icy water
13.5ml	16.5ml	24ml	200ml

13.2.4 Equation

$CH_3OH + HNO_3 + H_2SO_4 ====== CH_3NO_2 + H_2O_2$

Figure 22: Preparing Nitro Methane (CH_3NO_2) -done



13.2.5 Procedure

1. Put 16.5ml of Nitric Acid (HNO_3) in a beaker.
2. Add 24ml of Sulphuric Acid (H_2SO_4) keeping below 25°C.
3. Add 13.5ml of Methanol (CH_3OH) in it gradually with a dropper keeping temperature less than 5 to 10°C.
   Note: If temperatures increased up to 35°C, put the mixture into a beaker full of ice.
4. After adding all of the Methanol (CH_3OH) into the mixture, stir it for 1 minute in the ice pot.
5. Pour this mixture into the 200ml of water.
6. A transparent colourless layer will be formed at the bottom of the beaker with a separate line and it will look very clear.
7. Get rid of the water and then wash it with water.

13.2.6 Special care

Cover the mixture of the acids when you are adding the Methanol (CH_3OH) in it. Cover all the time with a watch glass.

Figure 23: Special care for Nitro Methane (CH_3NO_2)

13.2.7 Mixtures of Nitro Methane (CH_3NO_2)

All of the mixtures are stronger than TNT.

13.2.7.1 Tested by M.Ahmed

Nitro Methane (CH_3NO_2)	80%
Woodsaw	20%

Nitro Methane (CH_3NO_2) was poured into the Woodsaw using a dropper. M.Ahmed created this with a quantity of 10-20gm final mixture. The power of explosion was approximately equivalent to 100gm of TNT or any other main charge.

13.2.7.2 Nitro Methane (CH_3NO_2) (Ethyl Dynamite)

Nitro Methane (CH_3NO_2)	95%
Ethyl Dynamite	5%

Note: Add the dynamite in Nitro Methane (CH_3NO_2) in the ice bath in a beaker, it will produce colourless liquid.??

13.2.7.3 Nitro Methane (CH_3NO_2) mix (Aniline)

Nitro Methane (CH_3NO_2)	94%
Aniline ($C_6H_5NH_2$)	6%

This is the strongest mixture of Nitro Methane (CH_3NO_2).

13.2.7.4 Tested by M.Ahmed

Nitro Methane (CH_3NO_2)	64 gm
Ammonium Nitrate (NH_4NO_3)	160 gm

Nitro Methane (CH_3NO_2) was poured into the Woodsaw using a dropper. This mixture is the most sensitive in detonating. This is even more powerful than mixture 1.

13.2.7.4.1 Preparation

1. Fill a bowl with Ammonium Nitrate (NH_4NO_3).
2. Drop Nitro Methane (CH_3NO_2) on it gradually.
3. Leave it to dry.

13.2.7.5

Nitro Methane (CH_3NO_2)	94%
Ammonium Hydroxide (NH_4OH)	6%

It will look like water.

13.2.7.6 Tested by M.Ahmed

Nitro Methane (CH_3NO_2)	5 gm
Nitro Cellulose	8 gm

Note: Mix Nitro Methane (CH_3NO_2) into Nitro Cellulose.

13.2.8 Important note about Nitro Methane (CH_3NO_2) preparation

Stir the whole mix for 1 minute in an ice bath after mixing of the last substance. Never heat it. (If y mistake it gets hot it will explode and if it is dropped on the floor the same will happen. Therefore if it starts getting hot immediately transfer it in a cool place to cool it down. Handle it with care avoiding any shock).

It is a very strong poison, do not touch it. Never touch it's apparatus before washing it. It reacts with skin and the person affected will be killed in 36 hours.

13.3 Special mixtures

13.3.1 Nitric Acid (HNO_3) mixture

Nitric Acid (HNO_3) 90% concentrated	Nitro Benzine ($C_6H_5NO_2$)
Ratio 1:	1

It is a liquid explosive. It needs a detonator to explode it. It's colour is red.

13.3.1.1 Preparation

1. Add 50ml of Nitric Acid (HNO_3) in 50ml of Nitro Benzine ($C_6H_5NO_2$).
2. After mixing a new red liquid will be formed without any separate layer.

This liquid is very dangerous. It will explode with a detonator.

It exploded in the hands of Abu Hamza causing him to lose both of his hands. The quantity used was only 40ml. Nobody tries this one anymore as it is too powerful and dangerous. I think I should try it.

13.3.2 Carbonate

Carbon Tetra Chloride (CCl_4)	Aluminium (Al) powder
Ratio 1:	1

13.3.2.1 Preparation

1. Mix Carbon Tetra Chloride (CCl_4) in Aluminium (Al) powder drop by drop.
2. Stir it well with stirring rod. Quickly before evaporation of Carbon Tetra Chloride (CCl_4).

Note: This mixture must be used immediately after mixing it to avoid evaporation of Carbon Tetra Chloride (CCl_4). Compaction and confinement of the mix is very important for the strength of the mix.

13.3.3 Astrolight: (A)??

Aluminium (Al) powder	20 gm

Ammonium Nitrate (NH_4NO_3)	67 gm
Hydrosil Hydrous (N_2H_5OH)	33 gm

Ammonium Nitrate (NH_4NO_3)	66 gm
Hydrosil Hydrous (N_2H_5OH)	33 gm

13.3.4 Astrolight: (G)

Ammonium Nitrate (NH_4NO_3)	Anhydrous Hydrosil (N_2H_4)
Ratio 2:	1

The most powerful explosive to date (12-3-96). Good for 1-2 years. Direct from 'the master' himself.

13.3.4.1 Preparation

1. Mixing pot must be large as much as 5 times of the mixing material because the reaction of Ammonium Nitrate (NH_4NO_3) with Anhydrous Hydrosil (N_2H_4) increases it's volume for a while.
2. Ammonium Nitrate (NH_4NO_3) must be added very slowly and stirred will until completely dissolution.??

14. Activator

14.1 Teteryl

14.1.1 Properties

1. It is crystals in orange colour.
2. It's specific density is 1.7
3. It does not dissolve in water.
4. It dissolves in Sulphuric Acid (H_2SO_4), Benzine (C_6H_6) and Acetone (C_3H_6O) when it is hot.
5. If sometime we want to spoil it, simply add Sodium Sulphide ($NaSO_4$) 13% concentrated in it. It will lose it's power.
6. It is very powerful poison and it's gases are also poisonous.

14.1.2 Preparation

Di Methine Aniline ($CH_3CH(NH_2)_2$)	Sulphuric Acid (H_2SO_4)	Nitric Acid (HNO_3)
2 gm	24 gm	16 gm

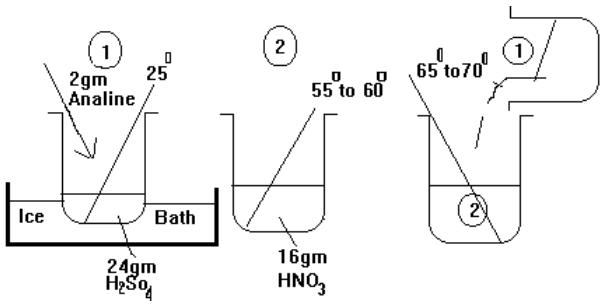
14.1.3 Procedure

1. Dissolve 2 gms of Di Methine Aniline ($CH_3CH(NH_2)_2$) in 24 gm Sulphuric Acid (H_2SO_4) at temperature of 25°C.

2. Now put 16 gm of Nitric Acid (HNO_3) 80% concentrated in another beaker and raise the temperature of the beaker to 55-60°C.
3. Add the beaker 1 into beaker 2 little by little with continuous stirring and temperature must be between 65-70°C.
4. After adding all the mixture of beaker 1 stir it very well for sometime and cool it down at room temperature. At this time there will be formation of red colour crystals. Filter them and wash them with hot water and then with Sodium Bicarbonate ($NaHCO_3$) 2% concentrated and check with PH paper to get rid of acid.
5. Take these crystals and add hot Acetone (C_3H_6O) in it until these crystals completely dissolve in hot Acetone (C_3H_6O).
6. Now cool it down and the pure crystals will be formed. Filter them and dry them in the shade.
7. These will be our Teteryl in orange colour.

Important: When you add beaker 1 into beaker 2, it must be in the ice bath for controlling the temperature.

Figure 24: Preparing Teteryl -done



14.2 RDX or Cylonight ($C_3H_6N_6O_6$)

RDX ($C_3H_6N_6O_6$) from Hexamine ($C_6H_{12}N_4$).

Figure 25: Preparing RDX ($C_3H_6N_6O_6$)

14.2.1 Properties

It is white crystals.
Not soluble in water but dissolves in hot Acetone (C_3H_6O) and Benzine (C_6H_6).
It is not too sensitive to heat and shock but it is sensitive to friction.
The beginning of explosive is 170°C by using Fulminate or Azide detonator but it can cannot?? Be exploded by fire and it can be used as a booster for compound detonator.

14.2.2 Preparation

Nitric Acid (HNO_3) conc. 85% +	Hexamine ($C_6H_{12}N_4$)	Water
120 ml	70 gm	750 ml

14.2.3 Procedure

1. 120ml of strong Nitric Acid (HNO_3) place in the beaker and drop the temperature between 20-30°C. The temperature must be controlled by the hot and cold water bath.
2. Add 70gm of Hexamine ($C_6H_{12}N_4$) to the acid 1/2 teaspoon at a time with 15 minutes gap, shaking gently continuously. It will normally take 3 hours to complete addition of Hexamine ($C_6H_{12}N_4$) in the acid.
3. After all Hexamine ($C_6H_{12}N_4$) has dissolved in the acid raise the temperature up to 55°C and maintain this temperature for 10 minutes.
4. Now cool this beaker to 20°C.
5. Add 750ml of cold water in the solution white crystals Salt (NaCl) will be formed and appeared in the beaker.
6. Filter the crystals and wash it with 750ml of cold water.
7. This is our RDX ($C_3H_6N_6O_6$) with impurities.

14.2.4 Purification

Add the solution of Sodium Carbonate (Na_2CO_3) 2% to neutralise the acid by using PH paper and filter again. If you want to purify RDX ($C_3H_6N_6O_6$) use hot Acetone (C_3H_6O) 150ml. Dissolve RDX crystals in hot Acetone (C_3H_6O) then cool it again and filter RDX crystals which can be stored in dry container.

14.2.5 New and better way (AS) 12-3-96.

Same quantities as before. I couldn't understand his English language! Don't trust this one until the English is made clear.

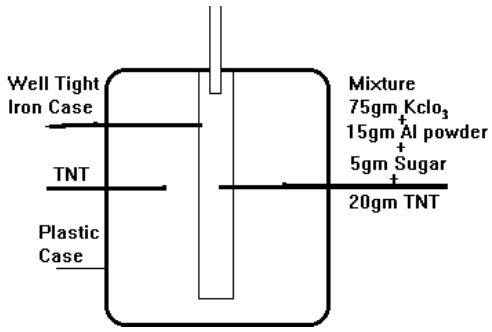
1. Crush Hexamine
2. 120 Nitric put to 5°C.
3. Add Hexamine to Nitric Acid slowly. Keep temperature between 20-30°C.
4. 10 minutes in hot bath at 50-55°C.
5. Increase temperature until you see brown smoke. If temperature does not exceed 90°C., decrease water/sand in hot bath (you can even take out all of water etc., but

don't touch to actual fire or metal!). Increase temperature until you see brown smoke. Not white. Maybe 90-100°C. If no brown smoke at 100°C., just go to next step. If brown smoke appears, take off immediately! and go to next step.

6. Add the 750 ml of water to the solution. Not vice versa.
7. Wait for 30 minutes.
8. Clean with sodium carbonate, checking with PH paper for non-acidity.
9. Filter using water to clean.
10. Dry with fan to become powder. Tools such as a fan or hairdryer are good for drying when indoors. Sunlight is a no-no for all chemicals, so if drying outside, do it in shade.

14.3 TNT or Tri-Nitro-Toluene ($C_6H_2CH_3(NO_2)_3$)

Figure 26: TNT ($C_6H_2CH_3(NO_2)_3$) -done



14.3.1 Properties

1. White or yellow coloured crystals.
2. It is white when pure.
3. It can't be dissolve in water.
4. Dissolve in Acetone (C_3H_6O), Nitric Acid (HNO_3) and Sulphuric Acid (H_2SO_4). It can formed again by adding water in the solution.
5. It does not react with metals.
6. Melting point is 80.6°C therefore we prefer TNT than any explosive and to store in different rockets e.g. RPG7, BM12, Rocket 122.
7. It will explode on 300-310°C.
8. It will be explode with detonator.
9. It will burn only with fire but if it is in big quantity like 100kg it may be explode.

14.3.2 Disadvantages

If we put it in the sunlight, a liquid layer will be formed on it's surface which very dangerous by friction. It can explode.

14.3.3 As a poison

1gm of powder of TNT ($C_6H_2CH_3(NO_2)_3$) is enough to kill a man by eating. It will kill in 12 to 20 hours.

14.3.3.1 Preparation of TNT ($C_6H_2CH_3(NO_2)_3$)

1. 29.4gm from Sulphuric Acid (H_2SO_4) with 14.6gm Nitric Acid (HNO_3), and this solution will added in the 10gm Toluene with good stirring and temperature will be between 30-40°C.
2. Continuous stirring for 15 minutes and after this collect the upper layer of the solution, this will be **mono Nitro toluene.**
3. Dissolve this layer in 15.9gm of Sulphuric Acid (H_2SO_4). This will be mix in ice bath. The heat the solution to 50°C.
4. Now add a mixture (which is consists of 5.25gm from Sulphuric Acid (H_2SO_4) and 5.25gm of Nitric Acid (HNO_3)) in this solution very slowly and temperature will be 80-90°C. After stirring it for 15 minutes. Make sure about the temperature which will be constant 80-90°C.
5. Now we have 2 layers of solution in the beaker, upper one is **Die Nitro Toluene** and lower one is acid.
6. Now add 14.5gm of Sulphuric Acid (H_2SO_4) in the beaker at the temperature of 90°C.
7. Raised the temperature 100-115°C at this temperature added mixture which is consist of 7.4gm of Sulphuric Acid (H_2SO_4) (diluted in water with the ratio of 15% Sulphuric Acid (H_2SO_4) and 85% water) and 7.4gm of Nitric Acid (HNO_3) 65% or above, in the beaker drop by drop and then stirring for 2 hours at the temperature 100-115°C.
8. After 2 hours we will take the upper layer of the solution and put it in the boiling water and stir for sometime then take the oily layer from the hot water and put it in the beaker, added cold water in it, it becomes solid and this is our TNT ($C_6H_2CH_3(NO_2)_3$) with impurities.

14.3.3.2 Purification of TNT ($C_6H_2CH_3(NO_2)_3$)

1. Make a thick (pasty) solution consisting of the following.
   concentrated Sodium Sulphite ($NaSO_3$) solution.
   concentrated Sodium Carbonate (Na_2CO_3) solution..
   Mix these 2 solutions at a ratio of 1:1.
2. Then we added a suitable quantity on a piece of TNT and heated the solution to 71°C, to maintain it from 5 and 7 minutes. This solution will be in red colour. This is impurity.
3. Take the oily layer on top of it and get rid of the red solution.
4. Now added hot water in the oily layer and then cold water in it, it becomes solid.
5. This is our pure TNT ($C_6H_2CH_3(NO_2)_3$).

15. Pushing and Launching Charge

15.1 Black powder mix (French)

Potassium Nitrate (KNO_3)	Charcoal (C)	Sulphur (S)
75%	15%	10%

This is normal production of a fast burning black powder.

15.1.1 Produce by hot method (to get rid of impurities)

1. Place 75gm of Potassium Nitrate (KNO_3) and 15gm of Charcoal and 10gm of Sulphur (S) in a beaker add to them 22ml of distilled water.
2. In another beaker place 64ml of Ethyl Alcohol (C_2H_5OH).
3. Now heat the mixture beaker till it makes bubbles without boiling.
4. In this moment add both the beakers with each other with good stirring for few minutes. Heating is stopped, filter the mixture in a piece of clean cloth. Square will in cloth and because the mixture to dry very well. Now you can crush and sieve it. You can use a wide sieve for making a slow burning black powder. If you need a fast burning black powder use a very fine sieve.

15.2 Fuse powders

Use a straw as the fuse container. When putting powders in straw, push hard so that it is tightly compressed. This will give you more time and is more reliable as there will be no gaps in the straw.

Name	Quantity
Potassium Chlorate ($KClO_3$)	50%
Sugar	50%

This one is slower.

Name	Quantity
Potassium Chlorate ($KClO_3$)	1
Sugar	1
Carbon	1

This one is faster.

15.3 Nitro Cellulose

Nitro Cellulose is a launching charge used in rockets and missiles to propel them long distance. This works in combination with black powder and black powder's mixtures. The main use of cotton is to prepare Nitro Cellulose. The army uses cotton to prepare Nitro Cellulose. With Nitro Cellulose, you can make smokeless powder.
Cellulose is mostly available in wood/Cotton, but also in sawdust (particularly from Snoober tree) and glucose.

15.3.1 Properties of Nitro Cellulose

1. It melts at 617°C.
2. Specific density is 1.6.
3. It dissolves in Acetone (C_3H_6O), Methanol (CH_3OH), Ethyl Alcohol (C_2H_5OH) and perfumes. Once dissolved, you cannot separate it again.
4. It explodes at 180-185°Carbon (C).
5. Very sensitive to temperature.
6. Not very sensitive to impact.

15.3.2 Properties of Cellulose ($C_6H_6O_5$)

1. Used in Snowber tree's sawdust at a high quantity. (Higher than cotton).
2. Found in large quantities in cotton, vegetables, sawdust.
3. Also used in glucose but to a lesser quantity.

15.3.3 Cellulose ($C_6H_6O_5$)

1. Take a cotton bud. Make lots of small buds out of this one. Keeping pulling them so that the cotton buds have air gaps in it.
2. Boil it in solution of 30% Sodium Hydroxide for 30 minutes.
3. Wash it well with solution of Sodium HypoChlorate ($NAOClO_3$).
4. These cotton buds are now your Cellulose ($C_6H_6O_5$).

Note: If you get the cotton from a chemist then there is no need to wash it. **M.Ahmed prepared Nitro Cellulose by just using cotton buds from a quilt. The buds weren't prepared using this method and the result worked fine. <u>This means that this cellulose preparation is probably unnecessary.</u> This is confirmed by AS. Just use good quality cotton from a pharmacy, not cheap stuff that breaks apart rather than stretching!**

15.3.4 Preparation for making Nitro Cellulose

Cotton	Sulphuric Acid (H_2SO_4)	Nitric Acid (HNO_3) 65% conc.
17gm	250ml	150ml

15.3.4.1 Method A

1. Prepare the cotton first. Stretch the cotton so that it becomes flaky and puffed.
2. Put Nitric Acid in a beaker. Put temperature down to 5-10°C.
3. Add Sulphuric Acid (H_2SO_4) slowly, stirring continuously and keeping the temperature below 25°C. The beaker should be in an ice bath.
4. Place 17gm of puffed pieces of cotton to the mixture, stirring. Keep the mixture <u>between</u> 15-25°C.
5. After this get rid of the acid mixture and wash the cotton quickly with running water for 10 minutes.
6. After this place the cotton buds in a pressure cooker and boil for 15-20 minutes. Start the timer when the cooker starts boiling.
7. Now take the cotton buds out of the pressure cooker and rinse thoroughly.

8. Wash with 2% Sodium Bicarbonate ($NaHCO_3$). Rinse well. Air it by pulling cotton buds and then dry. You can dry it with a fan or in the microwave at 25°C if you wish.
9. This is our pure Nitro Cellulose.

15.3.4.2 Easier method B

The result is the same, but this method require less manual labour although it takes very slightly longer. It only differs at points 5-7.

1. Prepare the cotton first. Stretch the cotton so that it becomes flaky and puffed.
2. Put Nitric Acid in a beaker. Put temperature down to 5-10°C.
3. Add Sulphuric Acid (H_2SO_4) slowly, stirring continuously and keeping the temperature below 25°C. The beaker should be in an ice bath.
4. Place 17gm of puffed pieces of cotton to the mixture, stirring. Keep the mixture between 15-25°C.
5. Leave the cotton in the acid mixture for about 5-8 minutes.
6. Take the cotton out and rinse the acid out. No need for water.
7. Boil in pressure cooker for 30 minutes. Timer starts when pressure cooker starts whistling.
8. Now take the cotton buds out of the pressure cooker and rinse thoroughly.
9. Wash with 2% Sodium Bicarbonate ($NaHCO_3$). Rinse well. Air it by pulling cotton buds and then dry. You can dry it with a fan or in the microwave at 25°C if you wish.
10. This is our pure Nitro Cellulose.

15.3.4.3 Note

1. When it dries from the 2% Sodium Bicarbonate ($NaHCO_3$), we can put it in an iron container (airtight) and detonate it with Black/White powder fuse.
2. Very sensitive to electricity. Can be used in place of Fulminate in a detonator??. Can fill pillow or quilt with Nitro Cellulose cotton buds and detonate with an electric wire. The victim will burn to death.

15.3.5 Shaped Nitro Cellulose

If you want to make the Nitro Cellulose into a particular shape, then:

1. Weigh the dry Nitro Cellulose cotton buds. Put 7 times this weight of Methanol (CH_3OH) into the cotton buds. Mix thoroughly and you will end up a paste. Dry thoroughly in whatever mould you decide upon.
2. If you don't have 7 times Methanol (CH_3OH), then you can use 4 times Acetone (C_3H_6O) instead. This can be used for launching. If we use Acetone (C_3H_6O), then the resultant is similar to the Nitro Cellulose used in the RPG7 and other military weapons.

15.3.6 Making wet Nitro Cellulose

This wet Nitro Cellulose is the paste which resulted from mixing with Methanol (CH_3OH), but we do not allow it to dry.

15.3.6.1

Nitro Cellulose paste	Potassium Nitrate (KNO_3)	Sulphur (S)	
Ratio 20gm	7.5gm	2.5gm	

Mix thoroughly and dry.

15.3.6.2

Nitro Cellulose paste	Nitro Methane (CH_3NO_2)
8gm	5gm

??Possible that this should be made with dry Nitro Cellulose. Stirring Nitro Methane (CH_3NO_2) is very dangerous.

15.3.7 Nitro Cellulose mixtures

1. Check the mixes used with Nitro Glycerine ($C_3H_5(ONO_2)_3$).
2. We can place any mixture like black powder, yellow or white before drying and mix very well with it by ratio 2 powder :1 Nitro Cellulose.

15.4 Pyro Cellulose

Cotton buds	Sulphuric Acid (H_2SO_4)	Nitric Acid (HNO_3)
5gm	75ml	75ml

15.4.1 Preparation

1. Add 75ml of Sulphuric Acid (H_2SO_4) in 75ml Nitric Acid (HNO_3) stirring and keep temp below 25°C.
2. Add 5gm small pieces of medical cotton in this solution very quickly.
3. Then stir it for 30 minutes.
4. Take the cotton and get rid of the acid solution.
5. Put this cotton in the large beaker with cold water.
6. Wash this cotton with fresh and continuous running water (under tape).
7. Now take the cotton and boil it for 1 1/2 hours in boiling water.
8. Now check cotton by PH paper and wash it with 2% Sodium Carbonate (Na_2CO_3).
9. Dry this for 48 hours in a warm place or in the sun.
10. This is our Pyro Cellulose. It can be used in place of Nitro Cellulose for various mixtures.??

15.5 Gun Cotton

15.5.1 Substance

Cotton	Mixture
4gm	140gm

Mixture consists of:

Nitric Acid (HNO_3)	24%

Sulphuric Acid (H_2SO_4)	67%
Distilled water	9%

15.5.2 Procedure

1. Put 4gm of cotton in 140gm of mixtures and stayed in the mixture for 20-30 minutes.??
2. After this collect the cotton and get rid of the Acid mix.
3. Do the same procedure which is done with Pyro Cellulose.

16. High temperature explosives

16.1 Mix of Aluminium (Al) powder??????? Ask Major how to do this.

We add Aluminium (Al) to any mix it will be a highly temperature because Aluminium (Al) mix react with the product of explosion like this.

2Al + 3CO2 -------- ------- Al2CO3 + 3CO + High temperature
2Al + 3CO -------- ------- Al2CO3 + 3C + High temperature
2Al + 3H2O -------- ------- Al2CO3 + 3H2 + High temperature

Aluminium (Al) is very active because it has 3 collection in the outer shell then it can react with any metal therefore when in put it in one bomb, we must mix it with Parafineoi to prevent the action between Aluminium (Al) and metal. We must not place any Chloride to Aluminium (Al) mixture, because it making reaction with it even at usual temperature.

16.1.1 Example a - Amnal

(14 + (4 x 1) + 14 + (16 x 3)	2(27)
NH4NO3	+ 2Aluminium (Al) --------- Aluminium (Al)203 + N2 +2H2
78gm	54gm

Note: To make all type of mixture always calculate the molecular weight of substance. This bomb is used for attacking the especially in the night because it has high light and sound.

16.1.2 Example b - Amonight

It consist of :

Ammonium Nitrate (NH_4NO_3)	TNT ($C_6H_2CH_3(NO_2)_3$)	Aluminium (Al) powder
65%	20%	15%

This bomb is used for penetrating tans and other iron things.

16.1.3 Example c - Thermite

It consists of:

Magnesium (Mg) powder	Ferrous oxide	Aluminium (Al) powder	Clean motor oil
30gm	160gm	54gm	20gm

Ammonium Nitrate (NH4NO3) or Barium Oxide (BaO)
20gm

Put this in a tight iron container, detonator must be surrounded with yellow or white powder. This bomb produces heat 2300°C and we know that iron melting point is 1750°C only.

16.2 Molotov (old and modern one)

Figure 27: Molotov (old method)

Figure 28: Molotov (new method) -done

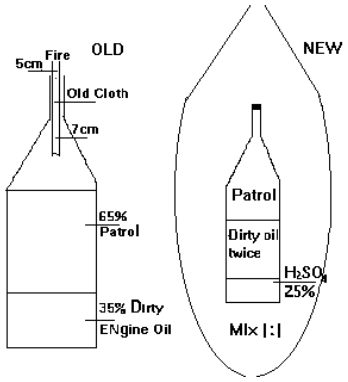


Figure 29: Using Molotov

When throw the bottle to the target, it will break and Sulphuric Acid (H_2SO_4) will react with Potassium Chlorate ($KClO_3$)+ Sugar 1:1 mixture and will give fire all oil.

16.3 Napalm bomb

It consist of:

Benzine (C_6H_6)	Sugar	Soap (Metallic)

Ratio 9:	1:	1

16.3.1 How to make Metallic Soap from Normal Soap

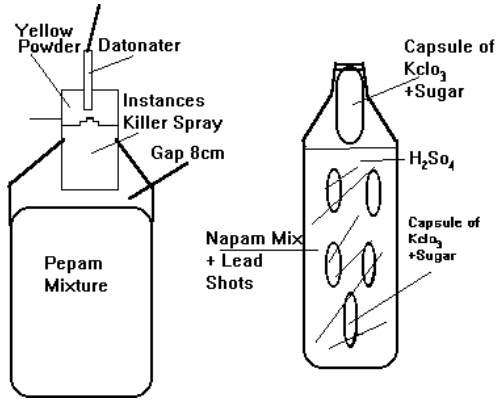
Take 1 piece of soap and put 5gm of Aluminium Sulphate and 5gm Magnesium Sulphate and boil it and stir it very good. This is Metallic soap.

Mix the mixture of Napalm very good and it is ready for fire.

You can place Magnesium powder + Aluminium (Al) powder and iron powder and foam and also Phosphorous. If you use a lot quantity of Phosphorous. It called Phosphorous. Napalm bomb and it fires itself.

Figure 30: Making metallic soap

Figure 31: Making a Napalm bomb



16.4 Sodium bomb

It consist of:

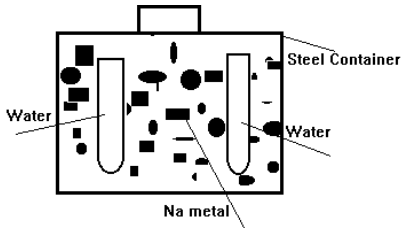
$2Na + 2H_2O$ --------- $2NAOH + H_2$

46gm 36gm

16.4.1 Take care

Don't touch bare hand and save your eyes from it. It can destroy the eyes totally. The bottle is filled 1/2 of water. 2 capsules are of Na and 2 capsules are of Calcium Carbide. On touching water the Na will fire on touchy water with Carbide H_2 will be produce. This small bottle will be put into oil tanker to explode and to give fire to the oil.

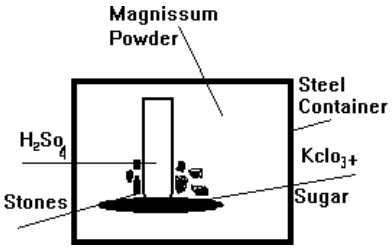
Figure 32: Sodium bomb -done



16.5 Magnesium (Mg) bomb

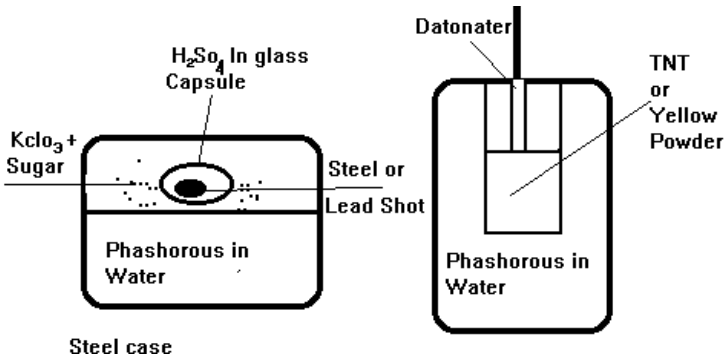
On throwing this bomb test with stone. The Sulphuric Acid (H_2SO_4) will be react with Potassium Chlorate ($KClO_3$) + Sugar will catch fire. The Magnesium (Mg) will catch fire and the steel case will explode.

Figure 33: Magnesium (Mg) bomb -done



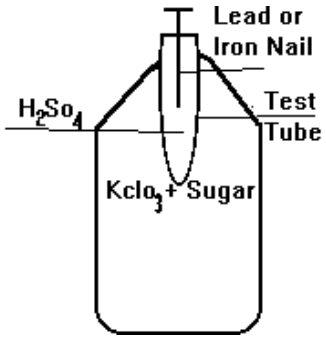
16.6 Phosphorous bomb

Figure 34: Phosphorous bomb -done



16.7 BKA bomb

Figure 35: BKA bomb -done



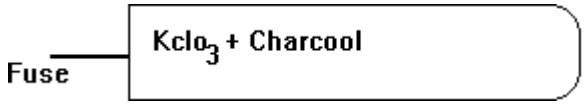
16.8 Smoke bomb

Potassium Chlorate ($KClO_3$)	Charcoal
60%	40%

Place this mixture iron pipe and fire it with the fuse. This will give smoke for long time.

SA. This is a rubbish smoke bomb! Tried it early 96.

Figure 36: Smoke bomb -done



16.9 Flashing bomb

Potassium Chlorate ($KClO_3$)	Sugar	Magnesium (Mg)
Ratio 3:	1:	1

Put this mixture in an iron pipe and fire it by fuse. This will give us light for longer period.

Figure 37: Flashing bomb

16.10 Time increase capsule

Sulphuric Acid (H_2SO_4) and some drops of Glycerine ($C_3H_5(OH)_3$) will break the capsule after 1 hour to react the acid with Potassium Chlorate ($KClO_3$) + Sugar mixture.

16.11 Burning mixture

16.11.1

Zinc (Zn) powder	Ammonium Nitrate (NH4NO3)
Ratio 5:	15

Put 1 drop of water over this mixture it will catch fire. This mixture will burn like Potassium Chlorate ($KClO_3$) + sugar mix.
Note: Be careful from air mixture.

16.11.2

Magnesium (Mg) powder Glycerine ($C_3H_5(OH)_3$)

Put some Magnesium (Mg) powder on the floor and drop some Glycerine ($C_3H_5(OH)_3$) on it. It will catch fire after little time.

16.11.3

Potassium permanganate Sulphuric Acid (H_2SO_4) (some drops)
It will catch fire.

16.12 Ignition Charge

Brake fluid (few drops)	Calcium Hypochloride (CaOCl)
30%	70%

Calcium Hypochloride (CaOCl) is used for swimming pool, cleaning water and work as bleaching agent. When these 2 things are mixed with each other it will catch fire.

17. Experiments

17.1 Urea Nitrate 7-12-95

Aim: to make 50gm Urea Nitrate

Name	Quantity
Urea	50gm
Water	75ml
Nitric Acid (HNO_3)	67.5ml

1. Added Urea to water. Stirred until completely dissolved which took about 15 minutes. Solution was freezing cold (about -5°C because of Urea). Pale white water colour.
2. Add Nitric Acid (HNO_3) VERY gradually continuously stirring. Then stirred for 2-3 minutes to mix solution. Solution became warm (35-40°C). Colour was pure white , texture was creamy. The mixture cooled down with time.
3. Left solution for 2 hours to crystallise. Crystals dropped to bottom of solution and crystallised.
4. Filtered solution and left crystals to dry.

Result: Work fine.

17.2 Potassium Chlorate ($KClO_3$) + Nitro Benzine ($C_6H_5NO_2$) (7-12-95)

Aim: Make Potassium Chlorate ($KClO_3$) mixture with Nitro Benzine ($C_6H_5NO_2$)

Potassium Chlorate ($KClO_3$)	40gm
Nitro Benzine ($C_6H_5NO_2$)	10gm (not ml)

I put Potassium Chlorate ($KClO_3$) into a milk container. Put Nitro Benzine ($C_6H_5NO_2$) on top using a dropper, so that the Nitro Benzine ($C_6H_5NO_2$) is spread over the whole surface area of the Potassium Chlorate ($KClO_3$).

Result: Nice bomb.

17.3 Urea Nitrate ($(NH_2)_2C(NO_3)_2$ + Aluminium (Al) (16-12-95)

Aim: To set off 2 bombs simultaneously using a primer cord

Urea Nitrate $(NH_2)_2C(NO_3)_2$	40gm
Aluminium (Al)	10gm
Detonator	Hydrogen Peroxide (H_2O_2) + Lead Azide (PbN_6)
Switch	Fuse

Urea Nitrate $(NH_2)_2C(NO_3)_2$	60gm
Aluminium (Al)	20gm
Sulphur (S)	20gm
Detonator	Primer cord

Method: Attached the primer cord to the first bomb's detonator. Theory was that when the detonator exploded it would set off the primer cord as well. This primer cord would set off the second bomb simultaneously.

Result: Only the first bomb went off and the half of the primer cord which was attached to the first bomb.
Conclusion: The primer cord had a gap in it. Because of this the explosion stopped before it could reach the 2nd bomb.
Method 2: Made another detonator and fuse. Connected this to the primer cord and set it off.
Result 2: This detonated the 2nd bomb.
Conclusion 2:

1. Both bombs work.
2. Primer cords are sometimes faulty.
3. Bombs power went downwards as do all bombs which are based on Urea Nitrate $(NH_2)_2C(NO_3)_2$ or Ammonium Nitrate (NH_4NO_3). This means they are best suited to use on a roof.

17.4 Impact grenade (Potassium Chlorate ($KClO_3$) + Sulphur (S)) (17-12-95)

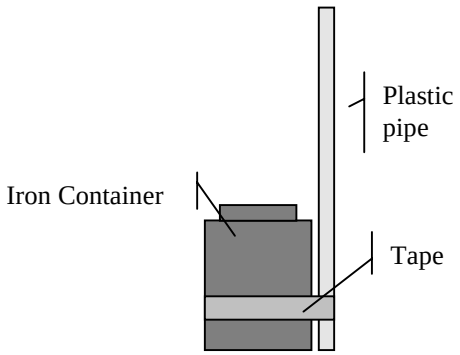
Aim: To make an impact grenade

Potassium Chlorate ($KClO_3$)	22gm
Sulphur (S)	2gm
Detonator	1gm Lead Azide (PbN_6)
Fuse	1
Iron container	1
Small pebbles (5mm each)	16
Plastic pipe	7 inches

Method:

1. Placed 8 small pebbles at bottom of iron container.
2. Put 1/2 gm Lead Azide (PbN_6) on top of pebbles.
3. Put mix on top of Lead Azide (PbN_6).
4. Put 8 more pebbles on mix.
5. Put 1/2 gm Lead Azide (PbN_6) on top of pebbles.
6. Screwed lid shut. **Make sure to clean out ALL of mix and Lead Azide (PbN_6) from screw area as this will detonate from friction of screwing.** Go away from other colleagues when screwing lid shut, so only you become shaheed and not other colleagues as well.
7. Taped plastic pipe outside container as shown in diagram below. This makes sure that the container lands vertically and created a better explosion.

Figure 38: Impact grenade



8. Threw bomb onto rock surface. Does not explode on grass surface. Do not throw with sudden jerky motion. Throw using grenade technique.

Result: Bomb exploded fine.

Conclusion:

1. Very dangerous to make. Avoid it.
2. Very dangerous to use in real missions as slightest jerk will explode it. Avoid using it.
3. To create shrapnel, cut lines into container to imitate an American grenade.

18. Appendices

18.1 Appendix A: Quality assurance

The following table shows which procedures I have actually tested. If you are a beginner, then it will help you to choose which experiments are more likely to work and therefore safer for you to attempt.

Haven't finished writing!

18.2 Appendix B: Strength of explosives

The following table sorts the explosives in their descending order of strength. I.e. The strength of their explosion. Where known, their speed of detonation is included.

Haven't finished writing!

18.3 Appendix C: Sensitivity of explosives to impact/friction

The following table sorts the explosives in their descending order of sensitivity to impact/friction.

Haven't finished writing!