CHEMIST'S CORNER ARTICLE #1: EXPLOSIVES
BY ZAPHOD BEEBLEBROX/MPG

UPLOADED BY -THE TRIXTER-

THIS ARTICLE DEALS WITH THE INSTRUCTIONS FOR CREATING SOME DANGEROUS EXPLOSIVES. IF YOU INTEND TO MAKE ANY OF THESE EXPLOSIVES, DO SO IN SMALL AMOUNTS ONLY, AS THEY ARE ALL DANGEROUS AND COULD SERIOUSLY INJURE OR KILL YOU IF DONE IN LARGER AMOUNTS. IF YOU DON'T KNOW ANYTHING ABOUT CHEMISTRY, DON'T DO THESE EXPERIMENTS! I AM NOT JOKING IN GIVING THIS WARNING. UNLESS YOU HAVE A DEATH WISH, YOU SHOULDN'T TRY ANY OF THE FOLLOWING UNLESS YOU HAVE HAD PRIOR EXPERIENCE WITH CHEMICALS.

I AM NOT RESPONSIBLE FOR ANY INJURY OR DAMAGE CAUSED BY PEOPLE USING THIS INFORMATION. IT IS PROVIDED FOR USE BY PEOPLE KNOWLEDGABLE IN CHEMISTRY WHO ARE INTERESTED IN SUCH EXPERIMENTS AND CAN SAFELY HANDLE SUCH EXPERIMENTS.

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I. COMMON "WEAK" EXPLOSIVES.

A. GUNPOWDER:
75% POTASSIUM NITRATE
15% CHARCOAL
10% SULFUR

THE CHEMICALS SHOULD BE GROUND INTO A FINE POWDER (SEPERATELY!) WITH A MORTER & PESTLE. IF GUNPOWDER IS IGNITED IN THE OPEN, IT BURNS FIERCELY, BUT IF IN A CLOSED SPACE IT BUILDS UP PRESSURE FROM THE RELEASED GASES AND CAN EXPLODE THE CONTAINER. GUNPOWDER WORKS LIKE THIS: THE POTASSIUM NITRATE OXIDIZES THE CHARCOAL AND SULFUR, WHICH THEN BURN FIERCELY. CARBON DIOXIDE AND SULFUR DIOXIDE ARE THE GASES RELEASED.

B. AMMONAL:
AMMONAL IS A MIXTURE OF AMMONIUM NITRATE (A STRONG OXIDIZER) WITH ALUMINUM POWDER (THE 'FUEL' IN THIS CASE). I AM NOT SURE OF THE % COMPOSITION FOR AMMONAL, SO YOU MAY WANT TO EXPERIMENT A LITTLE USING SMALL AMOUNTS.

C. CHEMICALLY IGNITED EXPLOSIVES:

1. A MIXTURE OF 1 PART POTASSIUM CHLORATE TO 3 PARTS TABLE SUGAR (SUCROSE) BURNS FIERCELY AND BRIGHTLY (SIMILAR TO THE BURNING OF MAGNESIUM) WHEN 1 DROP OF CONCENTRATED SULFURIC ACID IS PLACED ON IT. WHAT OCCURS IS THIS: WHEN THE ACID IS ADDED IT REACTS WITH THE POTASSIUM CHLORATE TO FORM CHLORINE DIOXIDE, WHICH EXPLODES ON FORMATION, BURNING THE SUGAR AS WELL.
2. USING VARIOUS CHEMICALS, I HAVE DEVELOPED A MIXTURE THAT WORKS VERY WELL F

OR IMITATING VOLCANIC ERUPTIONS. I HAVE GIVEN IT THE NAME 'MPG VOLCANITE' (TM). HERE IT IS: POTASSIUM CHLORATE + POTASSIUM PERCHLORATE + AMMONIUM NITRATE + AMMONIUM DICHROMATE + POTASSIUM NITRATE + SUGAR + SULFUR + IRON FILINGS + CHARCOAL + ZINC DUST + SOME COLORING AGENT. (SCARLET= STRONTIUM NITRATE, PURPLE= IODINE CRYSTALS, YELLOW= SODIUM CHLORIDE, CRIMSON= CALCIUM CHLORIDE, ETC...).

3. SO, DO YOU THINK WATER PUTS OUT FIRES? IN THIS ONE, IT STARTS IT. MIXTURE: AMMONIUM NITRATE + AMMONIUM CHLORIDE + IODINE + ZINC DUST. WHEN A DROP OR TWO OF WATER IS ADDED, THE AMMONIUM NITRATE FORMS NITRIC ACID WHICH REACTS WITH THE ZINC TO PRODUCE HYDROGEN AND HEAT. THE HEAT VAPORIZES THE IODINE (GIVING OFF PURPLE SMOKE) AND THE AMMONIUM CHLORIDE (BECOMES PURPLE WHEN MIXED WITH IODINE VAPOR). IT ALSO MAY IGNITE THE HYDROGEN AND BEGIN BURNING.

AMMONIUM NITRATE: 8 GRAMS
AMMONIUM CHORIDE: 1 GRAM
ZINC DUST: 8 GRAMS
IODINE CRYSTALS: 1 GRAM

4. POTASSIUM PERMANGANATE + GLYCERINE WHEN MIXED PRODUCES A PURPLE-COLORED FLAME IN 30 SECS-1 MIN. WORKS BEST IF THE POTASSIUM PERMANGANATE IS FINELY GROUND.

5. CALCIUM CARBIDE + WATER RELEASES ACETYLENE GAS (HIGHLY FLAMMABLE GAS USED IN BLOW TORCHES...)

II. THERMITE REACTION.

THE THERMITE REACTION IS USED IN WELDING, BECAUSE IT GENERATES MOLTEN IRON AND TEMPERATURES OF 3500 C (6000F+). IT USES ONE OF THE PREVIOUS REACTIONS THAT I TALKED ABOUT TO START IT!

STARTER=POTASSIUM CHLORATE + SUGAR
MAIN PT.= IRON (III) OXIDE + ALUMINUM POWDER (325 MESH OR FINER)

PUT THE POTASSIUM CHLORARE + SUGAR AROUND AND ON TOP OF THE MAIN PT. TO START THE REACTION, PLACE ONE DROP OF CONCENTRATED SULFURIC ACID ON TOP OF THE STARTER MIXTURE. STEP BACK! THE RATIOS ARE: 3 PARTS IRON(III) OXIDE TO 1 PART ALUMINUM POWDER TO 1 PART POTASSIUM CHLORATE TO 1 PART SUGAR.
WHEN YOU FIRST DO IT, TRY 3G:1G:1G:1G!
ALSO, THERE IS AN ALTERNATIVE STARTER FOR THE THERMITE REACTION. THE ALTERNATIVE IS POTASSIUM PERMANGANATE + GLYCERINE. AMOUNTS: 55G IRON(III) OXIDE, 15G ALUMINUM POWDER, 25G POTASSIUM PERMANGANATE, 6ML GLYCERINE.

III. NITROGEN-CONTAINING HIGH EXPLOSIVES.

A. MERCURY(II) FULMINATE

TO PRODUCE MERCURY(II) FULMINATE, A VERY SENSITIVE SHOCK EXPLOSIVE, ONE MIGHT ASSUME THAT IT COULD BE FORMED BY ADDING FULMINIC ACID TO MERCURY. THIS IS SOMEWHAT DIFFICULT SINCE FULMINIC ACID IS VERY UNSTABLE AND CANNOT BE PURCHASED. I DID SOME RESEARCH AND FIGURED OUT A WAY TO MAKE IT WITHOUT FULMINIC ACID. YOU ADD 2 PARTS NITRIC ACID TO 2 PARTS ALCOHOL TO 1 PART MERCURY. THIS IS THEORETICAL (I HAVE NOT YET TRIED IT) SO PLEASE, IF YOU TRY THIS, DO IT IN VERY* SMA

LL AMOUNTS AND TELL ME THE RESULTS.

B. NITROGEN TRIIODIDE

NITROGEN TRIIODIDE IS A VERY POWERFUL AND VERY SHOCK SENSITIVE EXPLOSIVE. NEVER STORE IT AND BE CARFUL WHEN YOU'RE AROUND IT- SOUND, AIR MOVEMENTS, AND OTHER TINY THINGS COULD SET IT OFF.

MATERIALS-
- 2-3G IODINE
- 15ML CONC. AMMONIA
- 8 SHEETS FILTER PAPER
- 50ML BEAKER
- FEATHER MOUNTED ON A TWO METER POLE
- EAR PLUGS
- TAPE
- SPATULA
- STIRRING ROD

ADD 2-3G IODINE TO 15ML AMMONIA IN THE 50ML BEAKER. STIR, LET STAND FOR 5 MIN UTES.
DO THE FOLLOWING WITHIN 5 MINUTES!

RETAIN THE SOLID, DECANT THE LIQUID (POUR OFF THE LIQUID BUT KEEP THE BROWN SOLID...). SCAPE THE BROWN RESIDUE OF NITROGEN TRIIODIDE ONTO A STACK OF FOUR S HEETS OF FILTER PAPER. DIVIDE SOLID INTO FOUR PARTS, PUTTING EACH ON A SEPERATE SHEET OF DRY FILTER PAPER. TAPE IN POSITION, LEAVE TO DRY UNDISTURBED FOR AT L EAST 30 MINUTES (PREFERRABLY LONGER). TO DETONATE, TOUCH WITH FEATHER. (WEAR EA R PLUGS WHEN DETONATING OR COVER EARS- IT IS VERY LOUD!)

C. CELLULOSE NITRATE (GUNCOTTON)

COMMONLY KNOWN AS SMOKELESS POWDER, NITROCELLULOSE IS EXACTLY THAT- IT D OES NOT GIVE OFF SMOKE WHEN IT BURNS.

MATERIALS-
- 70ML CONCENTRATED SULFURIC ACID
- 30ML CONCENTRATED NITRIC ACID
- 5G ABSORBENT COTTON
- 250ML 1M SODIUM BICARBONATE
- 250ML BEAKER
- ICE BATH
- TONGS
- PAPER TOWELS

PLACE 250ML BEAKER IN THE ICE BATH, ADD 70ML SULFURIC ACID, 30 ML NITRIC ACI D. DIVIDE COTTON INTO .7G PIECES. WITH TONGS, IMMERSE EACH PIECE IN THE ACID SO LUTION FOR 1 MINUTE. NEXT, RINSE EACH PIECE IN 3 SUCCESSIVE BATHS OF 500ML WATE R. USE FRESH WATER FOR EACH PIECE. THEN IMMERSE IN 250ML 1M SODIUM BICARBONATE. IF IT BUBBLES, RINSE IN WATER ONCE MORE UNTIL NO BUBBLING OCCURS. SQUEEZE DRY

AND SPREAD ON PAPER TOWELS TO DRY OVERNIGHT.

D. NITROGLYCERINE

NITROGLYCERINE IS A *VERY* DANGEROUS SHOCK SENSITIVE EXPLOSIVE. IT IS USED IN MAKING DYNAMITE, AMONG OTHER THINGS.
I AM NOT SURE AS TO THE PROPORTIONS AND AMOUNTS OF CHEMICALS TO BE USED, SO I SHALL USE ESTIMATES.

MATERIALS-
70ML CONC. SULFURIC ACID
30ML CONC. NITRIC ACID
10 ML GLYCERINE
ICE BATH
150ML BEAKER

PUT THE 150ML BEAKER IN THE ICE BATH AND MAKE SURE THAT IT IS VERY COLD. SLOWLY ADD THE 70ML SULFURIC AND 30ML NITRIC ACIDS TO THE BEAKER, TRYING TO MAINTAIN A LOW TEMPERATURE. WHEN THE TEMPERATURE STARTS TO LEVEL OFF, ADD ABOUT 10ML GLYCERINE. IF IT TURNS BROWN OR LOOKS FUNNY, **RUN LIKE HELL**. WHEN NITROGLYCERINE TURNS BROWN, THAT MEANS IT'S READY TO EXPLODE... IF IT STAYS CLEAR AND ALL WORKS WELL, KEEP THE TEMPERATURE AS LOW AS YOU CAN AND LET IT SIT FOR A FEW HOURS. YOU THEN SHOULD HAVE SOME NITROGLYCERINE, PROBABLY MIXED WITH NITRIC AND SULFURIC ACIDS. WHEN YOU SET IT OFF, YOU MUST NOT BE NEARBY. NITROGLYCERINE CAN FILL 10,000 TIMES ITS ORIGINAL AREA WITH EXPANDING GASES. THIS MEANS THAT IF YOU HAVE 10ML'S OF NITROGLYCERINE IN THERE, IT WILL PRODUCE SOME 100,000ML'S OF GASES.
TO MAKE IT INTO DYNAMITE, THE NITROGLYCERINE MUST BE ABSORBED INTO SOMETHING LIKE WOOD PULP OR DIAMAECEOUS EARTH (SPELLED SOMETHING LIKE THAT).

IV. OTHER STUFF

A. PEROXYACETONE

PEROXYACETONE IS EXTREMELY FLAMMABLE AND HAS BEEN REPORTED TO BE SHOCK SENSITIVE.

MATERIALS-
4ML ACETONE
4ML 30% HYDROGEN PEROXIDE
4 DROPS CONC. HYDROCHLORIC ACID
150MM TEST TUBE

ADD 4ML ACETONE AND 4ML HYDROGEN PEROXIDE TO THE TEST TUBE. THEN ADD 4 DROPS CONCENTRATED HYDROCHLORIC ACID. IN 10-20 MINUTES A WHITE SOLID SHOULD BEGIN TO APPEAR. IF NO CHANGE IS OBSERVED, WARM THE TEST TUBE IN A WATER BATH AT 40 CELSI

US. ALLOW THE REACTION TO CONTINUE FOR TWO HOURS. SWIRL THE SLURRY AND FILTER I T. LEAVE OUT ON FILTER PAPER TO DRY FOR AT LEAST TWO HOURS. TO IGNITE, LIGHT A CANDLE TIED TO A METER STICK AND LIGHT IT (WHILE STAYING AT LEAST A METER AWAY) .

B. SMOKE SMOKE SMOKE...

THE FOLLOWING REACTION SHOULD PRODUCE A FAIR AMOUNT OF SMOKE. SINCE THIS REA CTION IS NOT ALL THAT DANGEROUS YOU CAN USE LARGER AMOUNTS IF NECESSARY FOR LAR GER AMOUNTS OF SMOKE.

6G ZINC POWDER
1G SULFUR POWDER

INSERT A RED HOT WIRE INTO THE PILE, STEP BACK. A LOT OF SMOKE SHOULD BE CR EATED.

THERE ARE MANY OTHER EXPERIMENTS I COULD HAVE INCLUDED, BUT I WILL SAVE THEM F OR THE NEXT CHEMIST'S CORNER ARTICLE. UPCOMING ARTICLES WILL INCLUDE GLOW-IN-TH E-DARK REACTIONS, 'PARTY' REACTIONS, THINGS YOU CAN DO WITH HOUSEHOLD CHEMICALS , AND MORE...

I WOULD LIKE TO GIVE CREDIT TO A BOOK BY SHAKASHARI ENTITLED "CHEMICAL DEMONST RATIONS" FOR A FEW OF THE PRECISE AMOUNTS OF CHEMICALS IN SOME EXPERIMENTS.

THIS IS IT FOR CHEMIST'S CORNER #1... LOOK FOR CHEMIST'S CORNER #2: WHAT TO DO WITH HOUSEHOLD CHEMICALS...

...ZAPHOD BEEBLEBROX/MPG!

TRICKS OF THE TRADE..APPLE-BOOTLEGGER

CRACKER JACK