Micro Popper
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The trend in chemistry is micro scale—it's quicker, cheaper, safer and less taxing on the environment. Here’s all that is required to downsize explosions and still retain the light, sound and projectile motion for an exciting demo: 2 or 3 drops of alcohol in a film canister.

Materials:
- Plastic 35 mm film canister with cover (translucent is best).
- 50 cm long piece of 2 wire zip cord (ordinary plastic or rubber covered lamp cord, gauge is not important).
- Spark source (a piezoelectric ignitor).
- Clips or electrical tape to secure zip cord to spark source.
- Small quantity of ethanol or methanol in a plastic transfer pipet or dropper.
- Put a piece of foam on the top with glue.

Assembly:
Cut apart about 5 cm of one end of the lamp cord. Trim one of these two wires off at about 4 cm. Strip back the insulation to expose approximately 1 cm of the wires on this end. Leave the other end of the wire square cut for the spark gap.

Attach the exposed wires to the electrodes of the spark source. Make a small hook out of the longer exposed wire and hook it in over the wire (electrode) in the opening of the ignitor. Place the other end of the wire in the bottom of the igniter by the electrode. Make sure the wires are in contact with the electrodes and tape them in place.

Pierce the center of the bottom of the film canister and insert the square cut end of the wire approximately 2 cm deep. Put tape over this so alcohol can’t get out. Tape a piece of foam to the top of the film canister.

Ready:
Add 2 or 3 drops of alcohol to the canister and snap on the cover. DO NOT OVERFILL OR YOU WILL SET YOURSELF ON FIRE! Wait for the fuel to vaporize completely. Cupping your warm hand around the canister speeds vaporization.

Aim:
Hold the film canister between the thumb and finger of one hand and point it in a safe direction. Do not aim at anyone. Remember, the top can take off at strange angles! Wear goggles.

Fire:
Apply the spark and away it goes. The projectile is that part not pierced by the wire.

Notes:
1. When demonstrating, follow the “Minimum Safety Guidelines for Chemical Demonstrations” published by the ACS Division of Chemical Education, Inc.

2. DO NOT USE EXCESS FUEL. Fuel not vaporized before the explosion continues to burn and will possibly melt the canister or cover. *Do not aim at anyone.*

3. The sound is startling, but not very loud. Do warn people to cover their ears.