**Black “Foam”**

**DESCRIPTION:**   
When sugar is reacted with concentrated sulfuric acid it creates a black foam made of elemental carbon. The water that is produced in the reaction is gaseous and causes the foam to rise.   
 H2SO4 + C12H22O11 → 12C + 11H2O + a mixture of acid and water

**TOPICS COVERED:** - organic reactions  
 - redox  
- color change   
- chemical change  
- decomposition

**MATERIALS NEEDED:**- a beaker ~1/3 full of powdered sugar  
- 18 M sulfuric acid, in a disposable pipet  
- stir rod   
- water

**PROCEDURE:**1. stir in a couple of drops of water in the sugar  
2. Stir in 1-2 pipet fulls of acid

**ADDITIONAL COMMENTS:**The foam does not grow instantaneously, it takes a few minutes. This demo should only be done on campus, due to waste concerns, and handling acid.

**SAFETY:**   
Concentrated sulfuric acid is very corrosive! Goggles, proper gloves, and protective clothing should be worn at all times when handling concentrated acid. Also, the foam needs to be washed with generous quantities of water several times to dilute any acid that remains. The foam, once washed, can be placed in a plastic bag and thrown away.

**REFERENCES:**Ford, L. *Chemical Magic;* Dover: Mineola, NY, 1993; pp 1 - 2.