

# Organic Chemistry: Lab 5

## Prelab

### Question #1

### Question #2

### Question #3

Scratching inside of the container with a glass rod releases very small glass shards into the solution, which can act as nucleation points upon which crystals can form. This is very important for crystallization as once a nucleation point is established spontaneous radial crystallization from this point will occur, however without nucleation points particles tend to remain in solution, even in supersaturated conditions.

#### Question #4

The boiling point of the cyclopentadiene, (the main product of cracking ) is only  $40^{\circ}\text{C}$  if the temperature of cracking was raised above  $40^{\circ}\text{C}$  the main product would boil off and be lost.

#### Question #5

Cyclopentadiene readily dimerises, so dimerisation will occur to form dicyclopentadiene if the reaction is left to long, or if the reaction is heating increasing the reaction rate, and the spontaneity of the reaction.