

Name _____
Chem 226

Section _____
Dr. Rusay

Pre lab Questions
Gas Chromatography & Fractional Distillation

In an earlier laboratory exercise, *Toxicity, Health & Safety*, you used an MSDS, which provided information for toluene. Using an MSDS for cyclohexane answer the following questions as part of the pre lab.

1. Is flammability a concern? If so, how should a mishap be handled?
2. Is inhalation a cause for concern? What precautions should you take handling cyclohexane? Briefly explain.
3. Can prolonged exposure cause toxic effects? If there were a risk of chronic exposure what measures could be taken to deal with the risk?

Flammability:
Inhalation:
Chronic Exposure:

- 2) Calculate retention times (R_f values) and relative area percents for the components in the chromatogram unknown provided to you. Identify each of the components in the unknown chromatogram by their retention times. *Refer to:*

<http://chemconnections.org/organic/chem226/Labs/GC-table.htm>

Complete the table below; identify each compound by name, draw a line drawing for each and list the compounds in order of increasing polarity. Report the retention times and relative area percent of each compound in the mixture.

<i>Unknown #:</i>			
Compound Name:	Structure	Retention Time	Relative %

Polarity: _____ < _____ < _____

Answer the questions from:

<http://chemconnections.org/organic/chem226/Labs/GC/GC-Prelab/GC-CUB.html>

A) 1. _____ A) 2. _____ A) 3. _____

A) 4.

B) #1 _____ #2 _____ #3 _____ #4 _____ #5 _____

C) _____ < _____ < _____ < _____

D)

E) 1. stationary phase: _____ mobile phase: _____

E) 2. stationary phase: _____ mobile phase: _____

F) _____ < _____ < _____ < _____