Course handouts July 12 16:00-17:30

**High-performance liquid chromatography (HPLC)**

*Prof. Marya Lieberman, Department of Chemistry and Biochemistry*

*University of Notre Dame, Notre Dame IN 46556 USA*

*mlieberm@nd.edu, skype: maryalieberman, phone: 574.631.4665*

**Presentation notes**

Lecture objective:

 Describe scientific basis for HPLC

 Describe the types of analysis commonly used for

 pharmacopoeia assays

 What could go wrong? Give two examples of misleading or

 erroneous HPLC data. Explain how to spot each error.

 List five experiments used to show that the HPLC is working right

1) Scientific basis for HPLC

 Chromatography

 Detection

 Internal and External Standards

 Integration and data processing

2) Samples

 What question are we trying to answer with HPLC?

 Sampling statistics

 Sample preparation

 3) Common pharmacopoeia methods

 Assay

 Impurities

 Uniformity

 Forensic use of HPLC data

 4) What could go wrong?

 class exercise

 5) System suitability testing: How do you tell your HPLC is working right?

 Control charts

 Establishing the linear range

 Measuring accuracy and precision

 Spike-recovery experiment

 Internal controls

 Intermediate precision/interlab testing

**One thing I learned is:**

**One question I have is:**