

## CHEMISTRY 255 -- Biochemistry Laboratory -- Spring 2009

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Time and Location: M or T; 1:30-5:20 p.m in Nobel 207

### Laboratory Schedule

<u>Day</u>	<u>Experiment</u>	<u>Techniques Used</u>
9/14, 9/15	Expt 1: Introduction to basic techniques	Measurements, dilutions, UV/Vis spectroscopy
9/21, 9/22	Expt 2: pH dependence of tyrosinase	Buffer preparation, spectroscopic enzyme assay
9/28, 9/29	Discussion on scientific writing; pH & pK <sub>a</sub> Exercises	Read/critique primary literature, Quantitative literacy
10/5, 10/6	NO LAB-Nobel Conference	
10/12, 10/13	Expt 3: Purification of tyrosinase	Extract preparation, ammonium sulfate cuts, dialysis, instrument operation, spectroscopic enzyme assay
10/19, 10/20	Expt 3 (cont'd)	Ion-exchange chromatography, enzyme assays, dialysis
10/26, 10/27	NO LAB-READING BREAK	
11/2, 11/3	Expt 3 (cont'd)	Gel electrophoresis, protein concentration and molecular weight determination, enzyme assays
11/9, 11/10	Expt 4: Kinetic analysis of tyrosinase	Spectroscopic enzyme assay, Michaelis-Menten kinetic analysis
11/16, 11/17	Tyrosinase experiment - design	Experimental design
11/23, 11/24	Writing consultations Tyrosinase experiment - preparation	Report consultations with instructor Experimental design/preparation
11/30, 12/1	Tyrosinase experiment – prep/execution	Experimental preparation/execution
12/7, 12/8	Tyrosinase experiment – exec/interpret.	Exp. execution/interpretation
12/14, 12/15	Tyrosinase experiment - presentations	Experimental presentations

Cover illustration: Crystal structure of the met-form of the copper-bound *Streptomyces castaneoglobisporus* tyrosinase in complex with a caddie protein, adapted from Matoba, *et al.* (2006) *J. Biol. Chem.* **281**:8981-8990.