

Technique Rubric

	Beginning (0)	Developing (2.6)	Adequate (3)	Accomplished (3.4)	Exemplary (4)
Organization	Did not read the experiment prior to class. No preparation in the laboratory notebook for the experiment. No idea what equipment or chemicals are required.	Experiment scanned/not completely read prior to class. No preparation in the laboratory notebook for the experiment. Student has some idea of required chemicals and equipment.	Experiment read prior to class. Laboratory notebook contains experiment title /purpose/key reaction. Student has basic idea of required chemicals and equipment.	Experiment thoroughly read prior to class. Laboratory notebook contains title/purpose/key reaction/completed table of reagents. Good understanding of required chemicals and equipment	Student has prepared detailed outline of experimental procedure. Glassware is clean and ready to be assembled. Laboratory notebook is prepared to receive experimental data.
Safety	Student is not appropriately dressed for lab. Student requires more than two verbal reminders to wear safety glasses. Apparatus/glassware/chemicals setup or utilized in unsafe manner.	Some clothing unsuitable-loose/baggy. Requires two verbal reminders regarding safety glasses during lab. Consistent/numerous errors in utilization of glassware/apparatus/chemicals.	Appropriately dressed for lab. Requires only single reminder regarding safety glasses. Requires assistance multiple times, beyond instruction given, to avoid errors in utilization of glassware/apparatus.	Appropriately dressed for lab. Rarely requires reminding about safety glasses. Occasionally needs assistance, beyond instruction given, to avoid errors in utilization of chemicals/glassware/apparatus.	Appropriately dressed for lab. Never requires reminder to wear safety glasses. Consistently utilizes glassware and other equipment correctly after instruction.
Chemical Hygiene	Work area and drawer look like a toxic dump - uncleaned chemical spills, many unlabeled samples/reagents/reactions. Glassware put away dirty and simply thrown in drawer.	Work area looks dirty and cluttered. Some containers not labeled containing samples/reagents/reactions. Drawer is disorganized/cluttered with many items needing to be cleaned.	Work area clean but somewhat disorganized/cluttered. All containers labeled in some fashion. Drawer is disorganized/cluttered with few items needing to be cleaned.	Work area is clean and organized. All containers labeled properly including samples/reagents/reactions. Glassware is put away clean but drawer disorganized.	Work area is neat and organized. Spills are attended to timely. All containers are properly labeled including samples/reagents/reactions. Glassware is put away clean and organized.
Laboratory Procedure	Laboratory procedure not properly followed. Chemicals are used in wrong amount, incorrect order of addition, steps followed in incorrect order, wrong reagents used.	Laboratory procedure generally followed but with one or more significant errors requiring student to restart from beginning more than once.	Laboratory procedure generally followed but with one or more significant errors requiring student to restart from beginning no more than once.	Laboratory procedure generally followed with minor errors not requiring student to restart procedure from beginning.	Laboratory procedure followed perfectly.
Product	Product not obtained/failure to complete lab.	Product obtained in a yield significantly below that of the class average. Product obtained with lower purity within ± 10 °C of expected melting/boiling point.	Product obtained in a yield consistent with class average. Product obtained with reasonable purity within ± 7 °C of expected melting/boiling point.	Product obtained in a yield consistent with class average. Product obtained with good purity within ± 5 °C of expected melting/boiling point.	Product obtained in a yield above class average. Product obtained in high purity as demonstrated by melting/boiling point and/or spectroscopy.