

<b>Criteria</b>	<b>Excellent</b>	<b>Good</b>	<b>Fair</b>	<b>Unacceptable</b>
Grammar, spelling and clarity	[5 pts] No spelling or grammatical errors; title page is properly formatted; report is neat and legible	[4 pts] No obvious spelling or grammatical errors; title page is properly formatted	[3 pts] Some spelling and grammatical errors; tables and figures are not properly labeled	[0 pt] Spelling and grammatical errors are distracting; no title page; no figures
Spectral Interpretation	[8 pts] Both IR and $^1\text{H}$ NMR spectra are attached and analyzed*	[5 pts] Both IR and $^1\text{H}$ NMR spectra are attached, but improperly analyzed*	[4 pt] IR and $^1\text{H}$ NMR spectra are attached but are not analyzed	[0 pt] Spectra are not attached
Results	[8 pts] Includes balanced, fully notated chemical reaction, melting points for starting material and product, and a reasonable reaction yield	[5 pts] Includes unbalanced chemical reaction, or is missing melting point for starting material and/or product, reaction yield reported without discussion of inaccurate results	[3 pts] Missing more than one of the following: balanced, fully notated chemical reaction, melting points for starting material and product, reaction yield	[0 pt] No answer
Question #1	[7 pts] Discussion includes reasonable prediction of precipitation, and addresses experimental observations	[5 pts] Discussion is not based on observations or the discussion is an unreasonable prediction of precipitation	[3 pts] Discussion is not based on observations & the discussion is an unreasonable prediction of precipitation	[0 pt] No answer
Question #2	[7 pts] Discussion includes appropriate resonance forms	[5 pts] Discussion does not include proper resonance forms	[3 pts] No discussion; incorrect resonance forms	[0 pt] No answer
Question #3	[6 pts] Reaction mechanism is correct for a general $\text{S}_{\text{E}}\text{Ar}$ reaction; electrophile is plausible based on experimental observations	[5 pts] Reaction mechanism is incorrect for a general $\text{S}_{\text{E}}\text{Ar}$ reaction or electrophile is not plausible based on experimental observations	[3 pts] Reaction mechanism is incorrect for a general $\text{S}_{\text{E}}\text{Ar}$ reaction & electrophile is not plausible based on experimental observations	[0 pt] No answer
Question #4	[6 pts] Appropriate chemical reactions are cited and support the answer to Q#3	[5 pts] Chemical reactions are cited that do not pertain to the conditions used in lab or do not support Q#3	[3 pts] Chemical reactions are cited that do not pertain to the conditions used in lab & do not support Q#3	[0 pt] No answer
Question #5	[7 pts] Discussion includes appropriate descriptive chemistry	[5 pts] Discussion lacks detail or is missing yield, mp, or discussion of the difference in crude vs. pure product	[3 pts] Discussion lacks detail or is missing yield, mp, & lacks discussion of the difference in crude vs. pure product	[0 pt] No answer
Question #6	[6 pts] Discussion is supported with experimental melting points	[5 pts] Discussion is not supported with experimental melting points	[3 pts] Discussion lacks detail or is grossly incorrect	[0 pt] No answer

\*Analysis of the  $^1\text{H}$  spectrum, involves an acceptable drawing of the product on the spectrum that is labeled, and relevant peaks should be assigned. Analysis of the IR spectrum includes assignment of relevant bands for major functional groups.