

**Formal Report: Synthesis Project**  
**The Ketal Protecting Group**  
**Chem 228 WS/2009**

Name: \_\_\_\_\_

Section: \_\_\_\_\_

**General/Grammar (20 points):**

Justification - not left <u>and</u> right justified	-5	_____
Poor general page layout (margins, font, etc)	-5	_____
Title - not properly worded	-2	_____
Spelling - general words misspelled	-2 each	_____
-Chemical names misspelled	-4 each	_____
Grammar - failure to comply with the following:	-2 to -10	_____
-Used and maintained proper tense for section, good general grammar		
Missing page numbers, cover page, section labels	-5 each	_____
General format of tables and figures	-2 to -5	_____
Failure to attach this gradesheet to paper front	-5	_____
<b>Subtotal: (not to exceed -20 points)</b>		_____

**Abstract (10 points):**

Missing Abstract entirely	-10	_____
Abstract not really an abstract	-8	_____
Missing chemical names or reactions	-2 to -5	_____
Missing mention of how purity was checked (eg. IR, NMR, GC, TLC etc.)	-2 to -5	_____
<b>Subtotal: (not to exceed -10 points)</b>		_____

**Introduction (20 points):**

Missing background information		
-Reasons for selecting compounds produced	-3	_____
-Commercial importance, sources, uses, etc.	-4	_____
-Review of reactions used, advant. & disadvan.	-5 to -10	_____
-Alternate synthesis routes, if possible	-5	_____
<b>Subtotal: (not to exceed -20 points)</b>		_____

**Procedure (60 points):**

Missing g/mol used (need both for all chemicals)	-5 each	_____
Missing balanced equations	-5 to -20	_____
-Equations, but not balanced	-3 to -12	_____
-Missing structures of chemicals	-3 to -15	_____
-Structures not typeset (each rxn)	-5	_____
Missing table of chemicals used	-5 to -20	_____
-Some info in table inaccurate or missing	-3 to -15	_____
-Table split across 2 pages	-5	_____
Procedure not all inclusive or incorrect	-3 to -12	_____
-Missing tests used (e.g. IR, NMR, GC, TLC)	-2 to -10	_____
<b>Subtotal: (not to exceed -60 points)</b>		_____

**IR Analysis (60 pts):**

Missing IR from intermediate steps or all steps	-10 each	_____
Missing reference IR from intermediates	-10 each	_____
Missing tables for the IR analysis	-20 each	_____
-Peak analysis incorrect	-2 to -10	_____
-Not all "significant" peaks analyzed	-2 to -10	_____
<b>Subtotal: (not to exceed -60 points)</b>		_____

**NMR Analysis (60 pts):**

Missing NMR from intermediate steps or all steps	-10 each	_____
Missing reference NMR from intermediates	-10 each	_____
Missing tables for the NMR analysis	-20 each	_____
-Peak analysis incorrect	-2 to -10	_____
-Not all "significant" peaks analyzed	-2 to -10	_____
<b>Subtotal: (not to exceed -60 points)</b>		_____

**Discussion/Results (60 points):**

Missing Tables of Results	-5 to -20	_____
-Product masses, % Yields, MP, other tests besides IR, NMR (eg. GC, TLC)		
Missing or incorrect calculations of % yield	-5 each	_____
Missing discussion of side reactions, yields, etc.	-5 to -10	_____
Discussion not logical	-5 to -15	_____
Missing discussion of "How to Improve Experiment"	-5 to -10	_____
<b>Subtotal: (not to exceed -60 points)</b>		_____

**References (10 points):**

No references	-10	_____
References are not endnotes	-8	_____
Incorrect formatting of citations	-5	_____
Failure to give citations for various information	-2 each	_____
<b>Subtotal: (not to exceed -10 points)</b>		_____

**Participation/Yellow Sheets (100 points):**

Failure to turn in yellow sheets (raw data)	-100	_____
Failure to turn in final product	-10	_____
Missing pre-lab information for each step (may all be included in one table)	-15 each	_____
Missing experimental details	-10 to -30	_____
Pages not dated and signed by experimenter and TA	-10	_____
Did not void blank spaces/Initial	-5 each	_____
<b>Subtotal: (not to exceed -100 points)</b>		_____

**Late Penalty** (After 4:30 pm, Friday 5/8/09) **-20pt/da** \_\_\_\_\_

**Total of reduced points (not to exceed -400 points):** \_\_\_\_\_

**Grand Total (400 minus Total of Reduced Points):** \_\_\_\_\_