Formal Report: Synthesis Project
Benzocaine Synthesis
Chem 228   FS/2014

Name:____________________   Section:___________

ATTACH THIS GRADESHEET TO THE FRONT OF YOUR PAPER

General/Grammar (20 points):
- Justification - not left and 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

Subtotal: (not to exceed 20 points)

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 -2 to -5
  (eg. IR, NMR, GC, TLC etc.)

Subtotal: (not to exceed 20 points)

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

Subtotal: (not to exceed 20 points)

Procedure (60 points):
- Did not use 3rd person, past tense -10
- Missing g, mmol 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 (each) -5
- Procedure not all inclusive or incorrect -3 to -12
  - Missing tests used (e.g. IR, NMR, GC, TLC) -2 to -10

Subtotal: (not to exceed 60 points)
**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  
**Subtotal: (not to exceed -60 points)**

**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  
**Subtotal: (not to exceed -60 points)**

**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  
**Subtotal: (not to exceed -60 points)**

**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  
**Subtotal: (not to exceed -10 points)**

**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 ea  
  - Did not void blank spaces/Initial: -5 each  
**Subtotal: (not to exceed -100 points)**

**Late Penalty**  
(After final exam, Wednesday 12/10/14) -20 pt/da

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

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