

Name: Brooke Olivia Class: _____ Date: _____

10TH GRADE CHEMISTRY RESEARCH PAPER CHEMISTRY GRADE RUBRIC

4

PROBLEM STATEMENT WITH HYPOTHESIS (5 PTS)

- a) Problem
- b) Hypothesis
- c) Data measured

10

INTRODUCTION (10 PTS)

- a) Clear statement of objectives and possible ways to meet objectives.
- b) Background information on the area of study, and its applications.
- c) Clear and concise explanation of the science behind investigation, units, mathematical manipulations, explanation of scientific terminology.

18

REVIEW OF LITERATURE (20 PTS)

- a) Described a variety of approaches/techniques/ alternatives to measuring properties. *extraction rxn*
- b) Described how properties are measured in industry and in the lab.
- c) Described problems with measuring various quantities.
- d) Addressed potential problems as suggested in literature.

14

EXPERIMENTAL DESIGN (15 PTS)

- a) Detailed description of materials, and procedures for each property measured.
- b) Clear sections (materials, procedures, and diagram) for each property explored.
- c) appropriate use of each section.

13

DATA/OBSERVATIONS (15 PTS)

- a) Data from each property explored including photographs, sample calculations, set-up, and equipment.
- b) Data tables for each property explored
- c) Commentary on quality of data, set-up.

13

ANALYSIS (15 PTS)

- a) Calculated and reported statistical analysis for each property including average, standard deviation, and box plot.
- b) Calculated percent error for each property
- c) Objective dialogue exploring experimental design, data, and results.

9

CONCLUSION & APPLICATION (10 PTS)

- a) Summary of research
- b) Links data to conclusion.
- c) Future research, errors, optimizing options.

9

OTHER (10 PTS)

- a) All drafts included and in proper order
- b) 3rd person past tense
- c) Rubric included with names

~~90~~

TOTAL SCORE (100pts)