

Aldol Reaction – Post Lab

Name _____ Bench _____

1. Mass Calculations

Theoretical yield	Actual yield	Percent yield

Show in detail calculations for theoretical yield. Give one or two plausible explanations if the yield is below 70%

2. Melting point Data

Product literature melting point	Product experimental melting point	Product calibrated melting point.

Based on your melting point, do you think your reaction was successful? Briefly explain.

3. Draw the mechanism of formation of *trans*-p-anisalacetophenone.

4. Why does acetophenone react with p-anisaldehyde rather than self-condensing?

5. When butanal and propanal are reacted under aldol conditions, 4 different products are made, draw them below.

6. Look up the step in glycolysis that involves a reverse aldol reaction on the internet or in a Biology text.

(a) Write an equation with chemical structures for the glycolysis step below.

(b) The reverse of this reaction would be a forward aldol. Indicate which of the products would be the enolate and which would be the electrophile if the reaction were run in reverse.