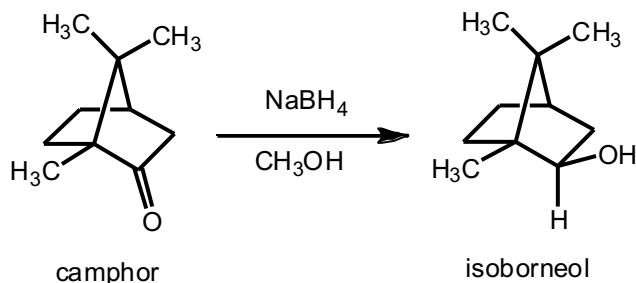


An Oxidation-Reduction Scheme: Borneol, Camphor, Isoborneol. Week 2

Reading Experiment 31, Parts B and C in Pavia (5th edition). For background information about Part B, read carefully the section entitled *Reduction of Camphor with Sodium Borohydride*.



Prelab

Along with the usual **Name, Title, Purpose** and **Outline**, show the **Chemical Reaction** (above) and a complete **Reagent Table** in your notebook, note that the amount of camphor shown in your table should only be 0.300 g. (you will need to know the amount of available camphor from the previous experiment before you complete the reagent table). Be sure to include the theoretical yield of isoborneol. As in Part A of this experiment, the structures shown above may or may not be the correct optical isomers of the materials you will be using.

Prelab Exercise

See separate handout.

Procedure

Follow the procedure described in Pavia for Part B. Use only 0.300 g of the camphor that you prepared in the previous experiment as the starting material (if you do not have enough material then use the provided camphor – don't mix with your sample). Scale up the quantity of reagents as suggested in the text.

To Complete the Experiment – Partial Report

Obtain a melting point and an IR spectrum (use the KBr pellet method) of your final product, isoborneol. At the instructor's option and instructions analyze your product by gas chromatography (GC). Your final partial report should be completed according to and include all of the items listed in the handout **Laboratory Report Format and Check List**.