

Kary Kuenzli and Tiffany Brandt-Abstract

Diphenhydramine, the active component in Benadryl was synthesized in three steps. We thought that this was interesting because we both take Benadryl for allergies each spring season. The procedures required for its synthesis were also interesting. The steps included a lithium aluminum hydride reduction, a Darzen's reaction and Williamson Ether Synthesis. We tried to green up our reaction by using 1,2 dimethoxyethane instead of using dichloromethane in the Darzen's reaction. This solvent is greener since it is not on the EPA's list of solvents targeted for reduction. Lithium aluminum hydride reduction was also compared to sodium borohydride reduction in an attempt to use a greener reagent. Borohydride reduction is greener because it is less reactive.