4-epoxylbenzyl alcohol was synthesized from 4-benzayloxy-3-methoxybenzaldehyde in three steps. In the first step vanillin was synthesized via an aromatic debenzylation reaction. This is an important and prevalent industrial product used in scents, perfumes, and flavoring. Next vanillin was converted into 4-hydroxy-3-methoxybenzenemethanol (vanillyl alcohol). This is a crystalline phenolic alcohol obtained by reducing vanillin. Vanillyl alcohol is considered a renewable starting material for the synthesis of flavoring ingredients, and is thus important in making industrial processes more environmentally sound. We then reacted vanillyl alcohol with epichlorohydrin to produce 4-epoxylbenzyl alcohol via an S_N2 reaction. By altering the chemical structure of vanillyl alcohol we wanted to see if it would produce a new scent. We then utilized green chemistry to make our syntheses more environmentally sound. We altered the catalyst in our first reaction. Instead of using TsOH to synthesize vanillin, we utilized the solid-supported acid Amberlyst-15. Amberlyst-15 is a greener reagent because it is more compatible with functional groups that are susceptible to conditions for reduction or hydrogenation. These conditions are often employed for aromatic debenzylation reactions. In addition, the reaction using Amberlyst-15 results in less organic and aqueous waste and could be recovered for reuse. We also altered our solvent choice in the second step of our reaction. Instead of using methanol, we used diacetone alcohol. This is a greener solvent based on standards determined by the EPA.