

Grignard Reagent Reaction Mechanism

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{youtube}X5l2vG576QA{/youtube}

This video discusses the reaction mechanism of grignard reagents with water - H_2O , D_2O , aldehydes including formaldehyde, ketones, esters, acid chlorides, epoxides - ethylene oxide, CO_2 , etc. This video contains examples and practice problems that not only help you to predict the major product of the reaction but also how to choose the right reagents to synthesize a primary, secondary, and tertiary alcohol. In addition, other reactions were included in this video such as oxidation by H_2CrO_4 , PCC, KMnO_4 & H_3O^+ , in addition to $\text{Na}_2\text{Cr}_2\text{O}_7$ with H_2SO_4 . Reduction of an alkyne to a cis alkene using H_2 & lindlar's catalyst and to a trans alkene using Na and NH_3 were also considered. The conversion of an alcohol into an alkyl halide using SOCl_2 and PBr_3 were also mentioned. The reagents used in this video include phenyl magnesium bromide, methyl magnesium bromide, ethyl magnesium bromide, acetyl chloride, cyclopentyl magnesium bromide, acetaldehyde, 2-butanone, etc.

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