

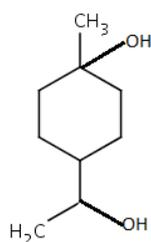
Answer on Question #83154, Chemistry/ Organic Chemistry

There are four products from the acid catalysed addition of two molecules of water to 1-methyl-4-vinylcyclohex-1-ene. However one is more likely to be formed than all of the others (the major product).

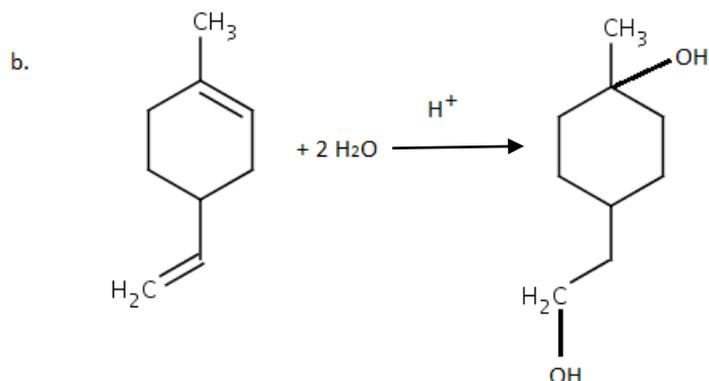
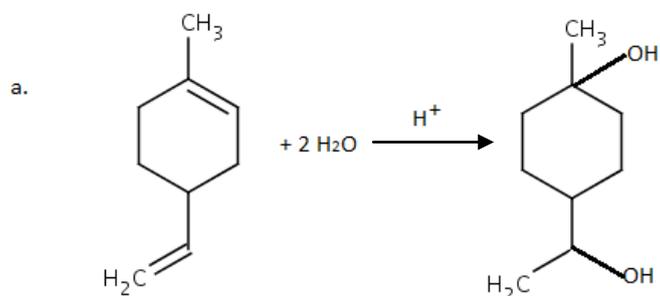
Draw the major product from this reaction

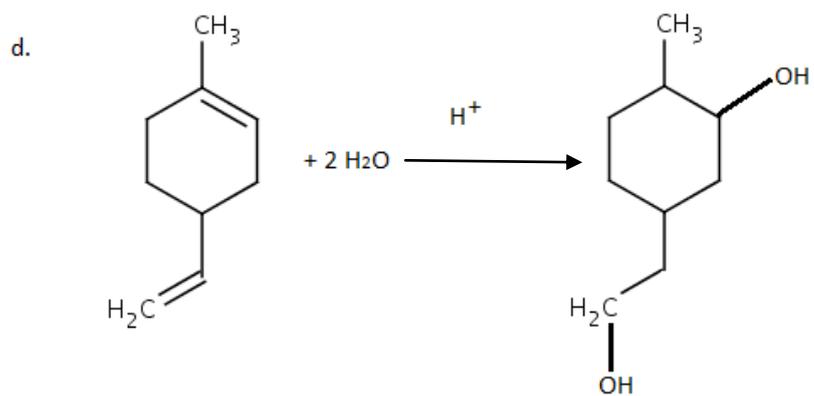
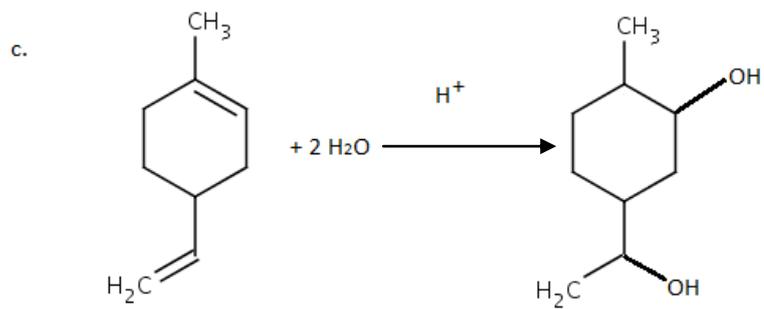
Answer

The addition of water to double bond is proceeding according to Markovnikov's rule: the addition of a proton to the double bond of an alkene results in a product with the acidic proton bonded to the carbon atom that already holds the greater number of hydrogens. According to Markovnikov's rule addition of two molecules of water to 1-methyl-4-vinylcyclohex-1-ene leads to the product a.:



Four possible products are represented by the following reactions:





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