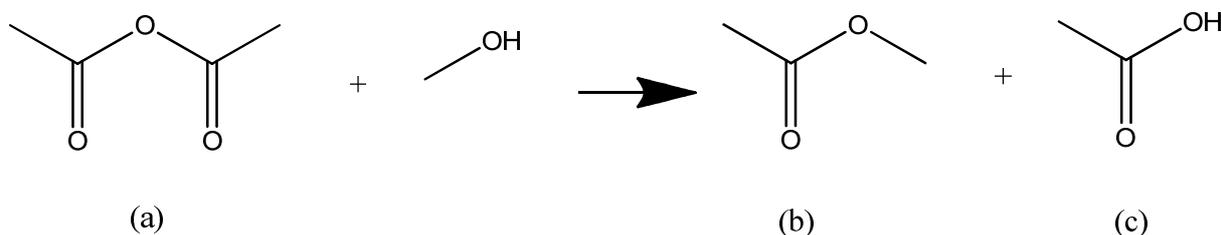


Question #58000, Chemistry / Other |

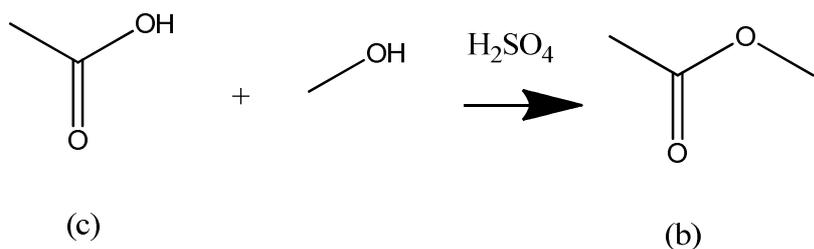
An organic compound (a) of molecular formula $C_4H_6O_3$ Produces two organic compounds (b) and (c) in reaction with methanol. (c) on refluxing with methanol in the presence of catalytic amount of H_2SO_4 gives (b). When (a) is allowed to react with excess conc. NH_4OH it furnishes (d) and (e). Write down the structures of (a) (b) (c) (d) and (e) and explain the reactions???

Answer:

The first reaction is the esterification with anhydride that gives esters:



The second reaction is the esterification too, but it involves interaction carboxylic acid with alcohol:



The reaction of acetic anhydride with ammonia leads to the formation of amide and ammonium salt of acetic acid:

