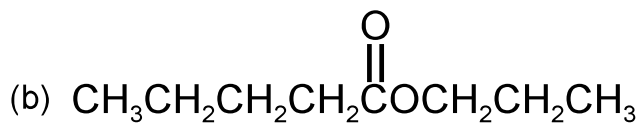
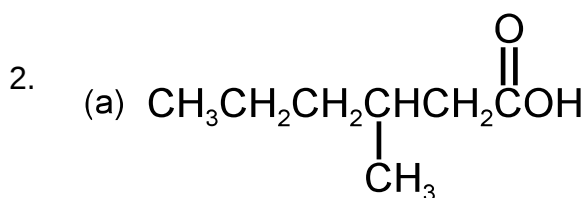


PRACTICE

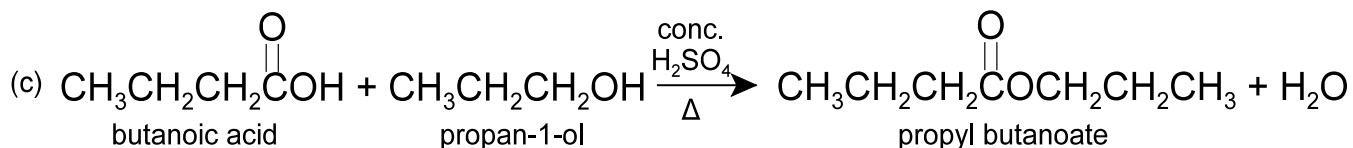
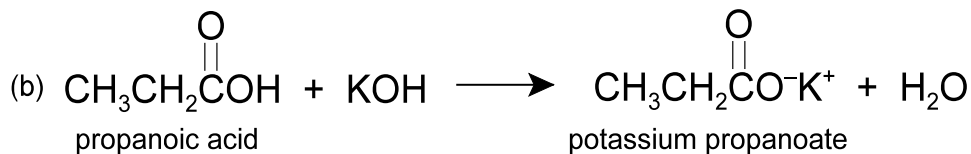
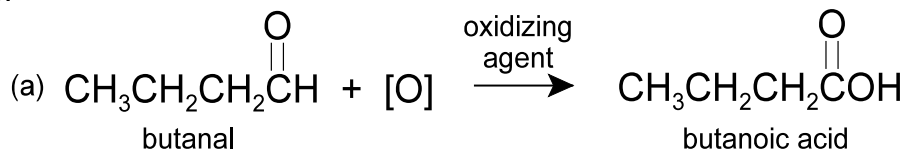
Organic Chemistry Lesson 6: Carboxylic Acids and Esters

ANSWERS

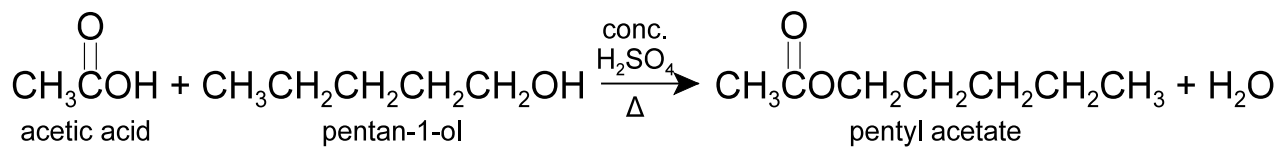
- (a) propanoic acid
(b) pentyl methanoate
(c) ethyl propanoate
(d) 3-isopropylheptanoic acid



4.

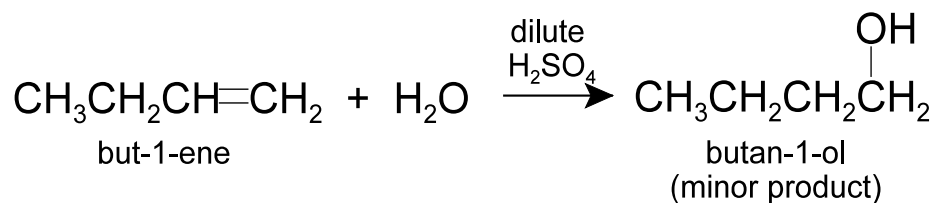


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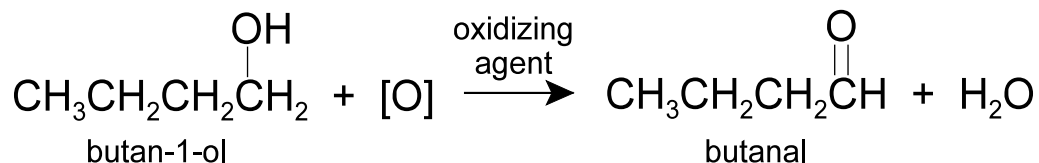


6.

Step 1: Hydration of the but-1-ene to produce butan-1-ol (note that butan-1-ol is the minor product; butan-2-ol is the major product).



Step 2: Controlled oxidation of the butan-1-ol to produce butanal.



Step 3: Controlled oxidation of the butanal to produce butanoic acid.

