

Carboxylic Acids - Questions by Topic

Q1.

Which compound has the highest boiling temperature?

(1)

- A butanal
- B butan-1-ol
- C butanone
- D butanoic acid

(Total for question = 1 mark)

Q2.

Carboxylic acids and acyl chlorides both react with alcohols to produce esters. Acyl chlorides are often preferred to carboxylic acids for this reaction because the yield of the ester is usually higher.

Which of the following statements is the best explanation for the higher yield?

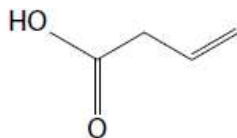
(1)

- A acyl chlorides react to remove any water produced
- B the reaction is not reversible
- C the reaction is less exothermic
- D the reaction has a higher atom economy

(Total for question = 1 mark)

Q3.

Lithium tetrahydridoaluminate(III), LiAlH_4 , is used to reduce the compound shown.



The product formed is:

(1)

- A a saturated alcohol
- B a saturated carboxylic acid
- C an unsaturated alcohol
- D an unsaturated ketone

(Total for question = 1 mark)

Q4.

Which reaction does **not** produce a carboxylic acid?

(1)

- A hydrolysis of an acyl chloride with cold water
- B hydrolysis of an ester by refluxing with dilute hydrochloric acid
- C hydrolysis of a nitrile by refluxing with aqueous potassium hydroxide
- D oxidation of a primary alcohol by refluxing with excess acidified potassium dichromate

(Total for question = 1 mark)