

Question 22 (6 marks)

A student prepared the compound methyl propanoate in a school laboratory.

- (a) Give a common use for the class of compounds to which methyl propanoate belongs. 1

~~esters~~ A common use for esters are flavouring for food.

- (b) In the preparation of this compound a few drops of concentrated sulfuric acid were added to the starting materials. The mixture was then refluxed for a period of time. 2

Why was it necessary to reflux the mixture?

It is necessary to reflux because the ~~react~~ rate of reaction will increase if heated and the products are very volatile so it needs to be refluxed.

- (c) Name the TWO reactants used in preparing the methyl propanoate and draw their structural formulae. 3

