

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

methyl propanoate is an ester and is commonly used as perfume

- (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 was necessary to reflux the mixture to keep the reaction going forwards as it removes water from thus the equilibrium having to shift

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

~~methanol~~ *methanol and propanoic acid*

