

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

in flavourings or perfumes.

- (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?

to increase rate of reaction and because it's in a condenser so a close system it would be dangerous if was an open system, and there is no build up of dangerous volatile reactants.

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

The two reactants would be methanol and propanoic acid

