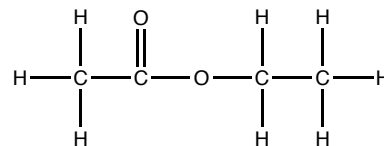




- 1 Ethyl ethanoate is an ester made by reacting ethanol with ethanoic acid in the presence of concentrated sulfuric acid.



a Draw a ring around the functional group in the ester.

b Give the role of the concentrated sulfuric acid.

- 2 Complete this table with the names, structures and functional groups of some organic compounds.

displayed formula			$\begin{array}{c} \text{H} \\ \\ \text{H} - \text{C} - \text{O} - \text{H} \\ \\ \text{H} \end{array}$	$\begin{array}{c} \text{H} & \text{H} \\ & \\ \text{H} - \text{C} & - \text{C} - \text{H} \\ & \\ \text{H} & \text{H} \end{array}$
name	propene	ethanoic acid		
functional group				

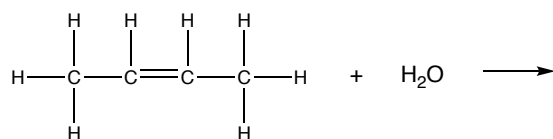
- 3 Identify the functional group in each of the following organic compounds.

molecule	add bromine water	add sodium	add sodium carbonate	is it miscible with water?	functional group
A	yellow-orange	fizzes	no reaction	✓	
B	colourless	no reaction	no reaction	✗	
C	yellow-orange	fizzes	fizzes	✓	

- 4 Butene reacts with steam in the presence of concentrated phosphoric acid at high temperature and pressure to form an alcohol.

a Name two names for the type of reaction taking place.

b Complete the equation for this reaction.



c Give two potential uses for the alcohol formed.

1

2