

## In context

Subject area: Organic chemistry

Level: 14–16 years (Higher)

Topic: Carboxylic acids

Source: [rsc.li/3o4cneK](https://rsc.li/3o4cneK)

**A flavour chemist wishes to make various flavourings for a new range of ice-creams.**

She knows that the flavour or smell of an ester can be deduced if the original alcohol and carboxylic acid that make the ester are known.

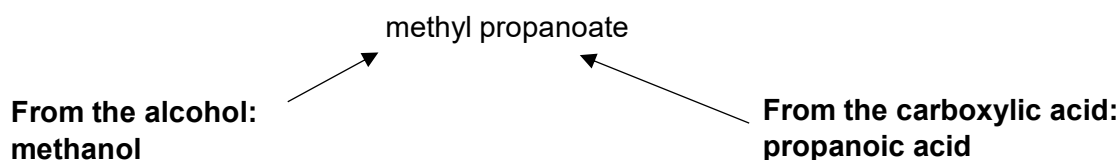


Source: Envato Elements

How are esters named?

The first part of the ester name comes from the name of the alcohol. The second part of the name comes from the name of the carboxylic acid.

So, if the alcohol is methanol and the carboxylic acid is propanoic acid, the ester will be called:



- The table shows the alcohol being used (vertically) and the carboxylic acid being used (horizontally).

The fruity flavours are written into each box.  
Complete the table by writing the name of the ester in each box.  
One has been completed for you.

	Propanoic acid	Butanoic acid	Pentanoic acid
Methanol	Apple Methyl propanoate	Raspberry	Mixed fruit
Ethanol	Pear	Cherry	Apple

	Pear	Cherry	Peach
Butan-1-ol			

2. **Draw the structure of the alcohol, carboxylic acid and ester needed to make the following flavours.**

Make sure you draw all of the chemical bonds in the molecule.

a) **Cherry**



Structure of alcohol	Structure of carboxylic acid
Structure of ester	

b) Pineapple



Structure of alcohol	Structure of carboxylic acid
Structure of ester	

c) Peach



Structure of alcohol	Structure of carboxylic acid
Structure of ester	