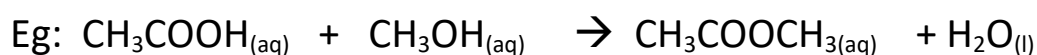


## Esters – Unit 1 Chemistry

Esters are compounds formed by reactions between a carboxylic acid and an alcohol. The type of reaction is a condensation reaction, due to the elimination of a H<sub>2</sub>O molecule from the reactants. This reaction is also known as an esterification reaction.



Ethanoic Acid + Methanol → Methyl ethanoate + Water

An ester has an ester linkage where the two reactants bond.

“Structural Reaction”

### Naming of Esters

When naming esters the name is back to front when compared with the structure. The first part of the name is derived from the alcohol used in the reaction, and the second part is derived from the carboxylic acid. The “oate” at the end of the name means ester!

The structure though is drawn with the carboxylic group first and the alcohol group 2<sup>nd</sup>.

<http://www.youtube.com/watch?v=MQYEP2v2Or0>

<http://www.youtube.com/watch?v=NKSd2RJoINA>

Fill in the following table:

Carboxylic Acid Structure + Name	Alcohol Structure + Name	Ester Structure + Name
Methanoic Acid	Methanol	
Ethanoic Acid	Ethanol	
Propanoic Acid	Methanol	
Butanoic Acid	1-Propanol	
Pentanoic Acid	1-Butanol	

Ethanoic Acid	1-Propanol	

When doing reactions that form esters do not forget to include the  $\text{H}_2\text{SO}_4$  as a catalyst. As well do not forget the water molecule as a product.

Complete the following:

Practice problem 10

Read 7.5 Sources and uses of Organic chemicals, page 295-298

Complete

7.5 Quick quiz and 7.5 Exercise Q1-6