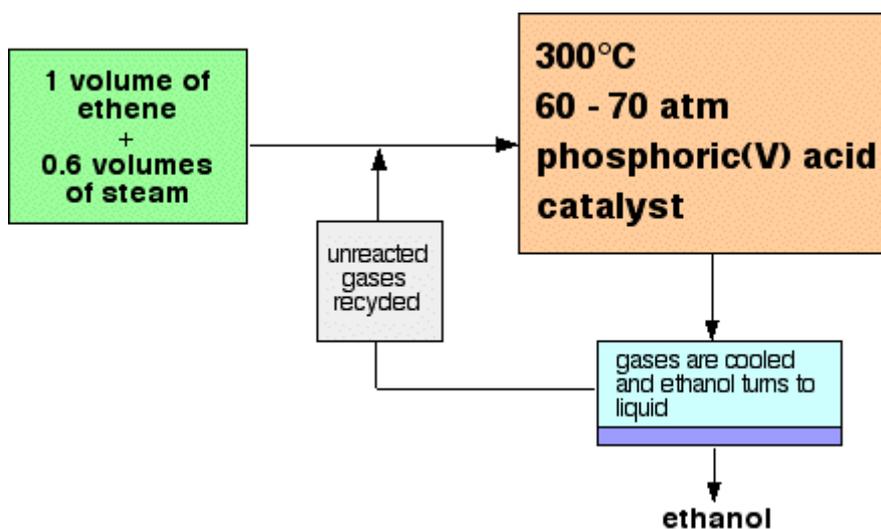


Chemguide – questions

ALKENES: DIRECT HYDRATION

This is going to be very short because there is little to understand on this page. Make sure that you have learned the conditions for the formation of ethanol if your syllabus wants it.

1. The diagram shows a flow scheme for the direct hydration of ethene to make ethanol.



- a) Write the equation for reaction occurring.
- b) By looking carefully at the information in this diagram, why is it bound to be necessary to recycle the unreacted gases in order to convert most of the ethene to ethanol?
- c) Give another reason why recycling the gases is necessary.
2. Apart from the formation of ethanol, You can't use this method to produce an alcohol where the OH group is at the end of a chain. Using propene ($\text{CH}_3\text{CH}=\text{CH}_2$), but-1-ene ($\text{CH}_3\text{CH}_2\text{CH}=\text{CH}_2$) and but-2-ene ($\text{CH}_3\text{CH}=\text{CHCH}_3$) as examples, explain why that is.