

Chemguide – questions

AMIDES: PREPARATION

- Ethanamide can be made by heating ammonium ethanoate. Write the equation for this reaction.
 - The ammonium ethanoate can be made by adding solid ammonium carbonate to an excess of concentrated ethanoic acid. Explain carefully why an excess of the acid is used.
 - The mixture of ammonium ethanoate and ethanoic acid is heated under reflux for 30 minutes and then distilled at about 170°C. Where does the ethanamide end up?
- Amides can also be produced from the reaction between an excess of concentrated ammonia solution and either an acyl chloride or an acid anhydride. Write the overall equation for the reactions involving an excess of concentrated ammonia solution and
 - propanoyl chloride,
 - ethanoic anhydride.

(This is very short, because as long as you know enough to be able to write the equations there isn't much to understand!)