

Chemguide – questions

CARBOXYLIC ACIDS: DECARBOXYLATION

1. Carboxylic acids can be decarboxylated by heating (usually) the sodium salt with soda lime.
 - a) What is soda lime?
 - b) In equations, soda lime is usually written as if it were sodium hydroxide. What is the advantage of using soda lime rather than sodium hydroxide itself?
 - c) Explain, using sodium propanoate as an example, what you understand by *decarboxylation*. Write the equation for the decarboxylation of sodium propanoate. You can write the soda lime as NaOH.
 - d) Some acids, such as benzoic acid, C_6H_5COOH , can be decarboxylated by heating the acid itself with soda lime. Write the equation for this reaction.