

Chemguide – questions

ESTERS: POLYESTERS

1. Poly(ethylene terephthalate) is made by a condensation polymerisation reaction between terephthalic acid (benzene-1,4-dicarboxylic acid) and ethane-1,2-diol.
 - a) Draw the structures for benzene-1,4-dicarboxylic acid and ethane-1,2-diol.
 - b) With the help of the structures you have just drawn, explain what is meant by “condensation polymerisation”.
 - c) Draw a short part of a polyester chain. You should show at least as much as you would get from two each of the original monomers.
 - d) Give two completely different uses for poly(ethylene terephthalate).
 - e) Polyesters are destroyed by contact with sodium hydroxide solution. Explain briefly why.