

Chemguide – questions

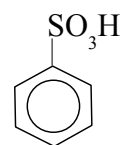
ARENES: ASSORTED REACTIONS

You may not need all of these reactions for exam purposes. Check your syllabus so that you don't waste time on things you don't need to know.

1. Compounds containing a benzene ring can usually be recognised because they burn with a very sooty flame.
 - a) Write the equation for the complete combustion of ethylbenzene, $C_6H_5CH_2CH_3$, in oxygen.
 - b) Explain why ethylbenzene burns in air with a very sooty flame.

2.
 - a) How could you convert benzene into cyclohexane? Give the reactants and conditions.
 - b) Why does benzene have a completely different set of properties from cyclohexane?

3. a) Give one method for converting benzene into benzenesulphonic acid:



- b) Write the formulae for the two organic products which you would get if you carried out a similar reaction with methylbenzene.
 - c) In practical terms, how does the reaction with methylbenzene differ from the benzene reaction?
4. How would you convert ethylbenzene, $C_6H_5CH_2CH_3$, into benzoic acid, C_6H_5COOH ?