

Chemguide – questions

ARENES: NITRATION

- In order to substitute a nitro group into a benzene ring to produce nitrobenzene, you use a nitrating mixture. What exactly does a nitrating mixture contain?
 - It is important to keep the temperature of the reaction below 50°C. Why?
 - You may well get some dinitrobenzene produced as well. Draw the structure, and give the full name, of the dinitrobenzene you are most likely to get.
 - Why won't you get much trinitrobenzene formed?
- The nitration of methylbenzene happens about 25 times faster than the nitration of benzene. Explain briefly why.
 - When you substitute a single nitro group into methylbenzene, you get a mixture of two products. Draw their structures and give their names.
 - Draw the structure and give the name of the product if you substitute three nitro groups into methylbenzene.