

Y13 – Arenes and Phenol Revision Checklist

Stick this checklist into your yellow book at the beginning of the topic. Tick off the topics as you cover them.		
In this module you are expected to be able to...	In Notes	Revised
Draw a bonding diagram to compare the structures of Kekule’s and the delocalised models of Benzene in terms of p-orbitals overlapping to form π bonds		
Describe three pieces of evidence to support the delocalised model of benzene in terms of the intermediate bond lengths, the ΔH hydrogenation and resistance to electrophilic addition		
Write a balanced equation for the nitration of benzene including the correct reagents and conditions		
Outline the mechanism for the nitration of benzene (electrophilic substitution) including equations for the formation of the NO_2^+ electrophile and the regeneration of the acid catalyst		
Write a balanced equation for the halogenation or alkylation of benzene describing the role of the halogen carrier as a catalyst		
Outline the mechanism for halogenation of benzene including equations to show the role of the halogen carrier in generating a positive electrophile		
Write balanced equations for the acylation of benzene to produce a phenylketone		
Explain the resistance to bromination of benzene, compared to alkenes, in terms of the delocalised electron density of the π bonds in benzene compared with the localised electron density of the $\text{C}=\text{C}$ bond in alkenes		
Explain the relative acidity of phenol and hence describe reactions of phenol with alkalis and group 1 metals to form salts		
Write a balanced equation for the reaction of phenol with bromine describing the appearance of the organic product 2,4,6-tribromophenol		
Explain the relative ease of bromination of phenol compared with benzene, in terms of electron-pair donation to the benzene ring from an oxygen p-orbital in phenol		
Recall the directing effect of $-\text{OH}$, NH_2 and NO_2 groups, and use appropriate information to deduce the effect of other groups.		

Pre-test Evaluation

I have...	
Updated my yellow book notes	
Ensured I understand all of my notes	
Looked on the open drive for additional work	
Asked my teacher for guidance	
Confidence rating	I’m doomed! -- - = + ++ I am the BOSS!