



# EMERALD KEY

## COMBINED SCIENCE - 4003



GCE ORDINARY LEVEL

# O Level Physical Science Zimsec Greenbook

**Peter S. P. Lim**



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for the nitration 4 01 ml of nitric acid 4 00 ml of sulfuric acid and 4 56 ml bromobenzene were used to complete the reaction with these measurements bromobenzene was found to be the limiting reagent since only 4 56 ml of bromobenzene was used the amount of product predicted to be recovered was 8 7533 g

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the soap in the lab is not suitable for this purpose 2 return to the lab and apply mineral oil to the affected area theory and explanation of the nitration of bromobenzene if the temperature of the reaction mixture exceeds 60 o

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the bromine substituent in bromobenzene is an ortho para director the para position is favored due to steric effects in the reaction that takes place in this lab a nitro group is substituted onto bromobenzene at the para position to form 1 bromo 4 nitrobenzene

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over 5 minutes slowly pipet this bromobenzene into the icy cold nitration mixture hno 3 h 2 so 4 in the 125 ml flask and stir continue to stir the reaction mixture in the ice bath for 30 minutes do not heat in a new 250 ml erlenmeyer

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the purpose of this lab was to observe where substituents are added on a benzene ring by way of electrophilic aromatic substitution the electrophilic source in the nitration of bromobenzene comes from a nitronium ion no2 which acts as the electrophilic species

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nitration of bromobenzene is an electrophilic aromatic substitution reaction the electrophile will be formed from 4 0ml of nitric acid and 4 0ml of sulfuric acid and will then react with 4 5ml of bromobenzene this will produce o bromonitrobenzene and p bromonitrobenzene

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chem 2261 lab 5 nitration of bromobenzene introduction an electrophilic aromatic substitution reaction is an important process that allows for intermediate chemical structures to be used as precursors to pharmaceuticals and other industrially produced chemicals by adding different functional groups into an aromatic ring

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lab report 10 nitration of bromobenzene raekwon filmore cm 244 section 40 march 27 2018 introduction for this experiment nitration of bromobenzene was the focus of the lab the benzene is an aromatic compound and when it reacts with wither a mixture of sulfuric acid or nitric acid creates what is known as a nitro group