

**Experiment 5: Reduction of *p*-Nitrophenol to  
*p*-Aminophenol**

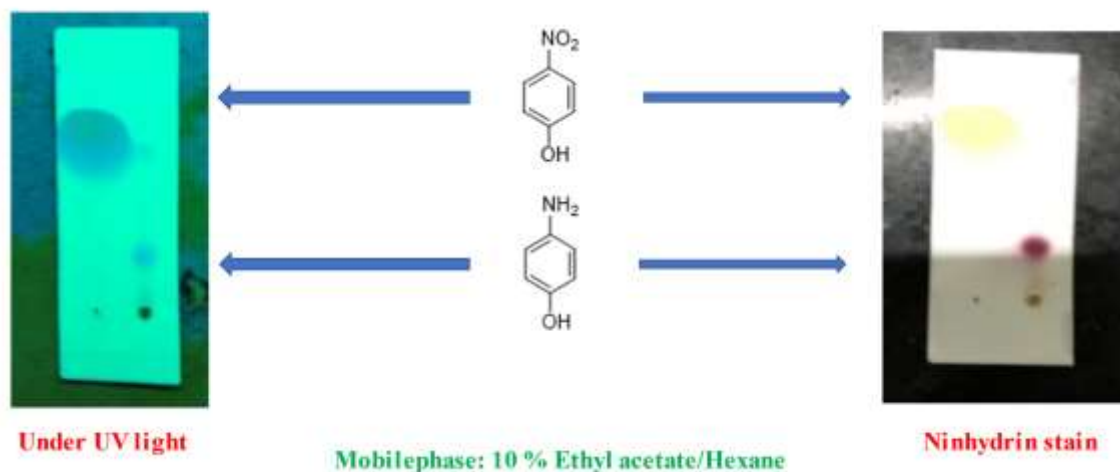
**Name:** Vidhi Shah

**Reg. No.:** 21BCE1297

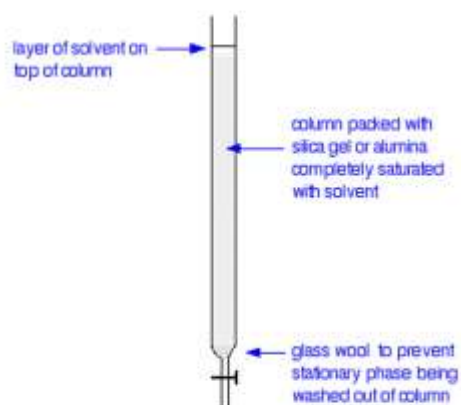
**Slot:** L11-L12

**Date:** 09/11/21

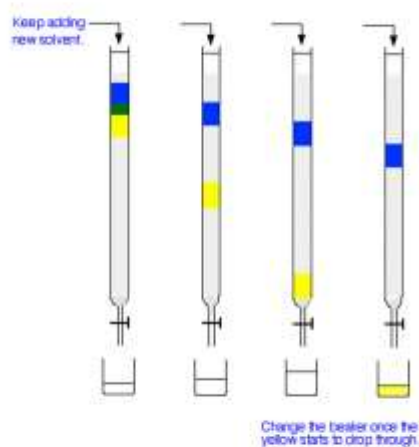
## Thin Layer Chromatography (TLC) Observation



## COLUMN CHROMATOGRAPHY

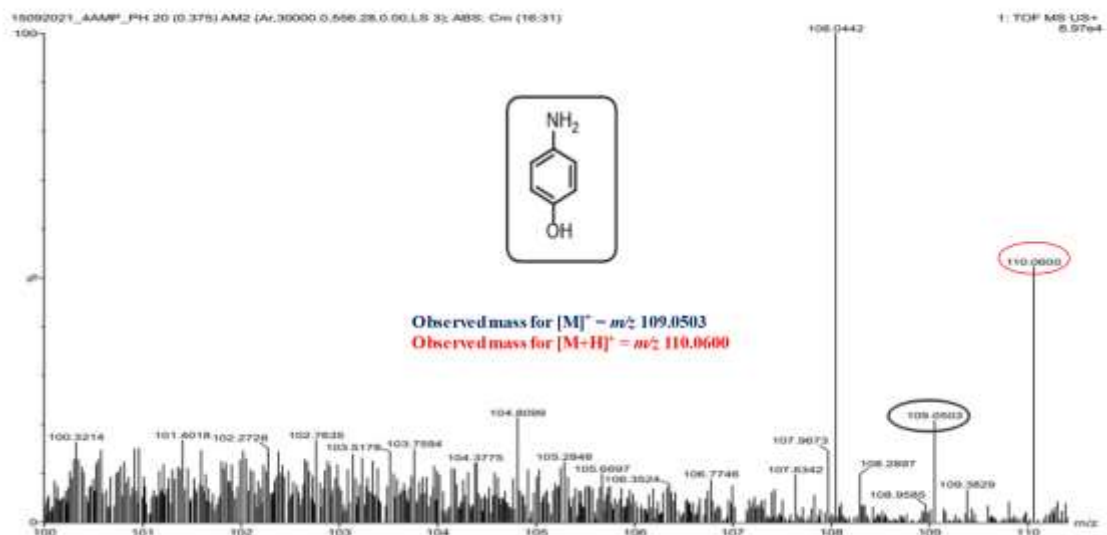


Picture -1

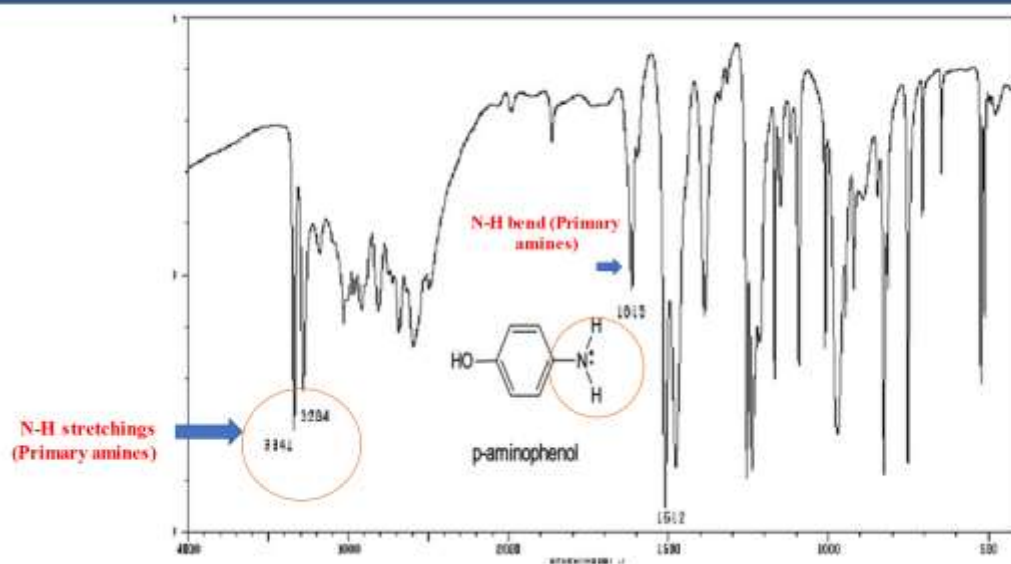


Picture -2

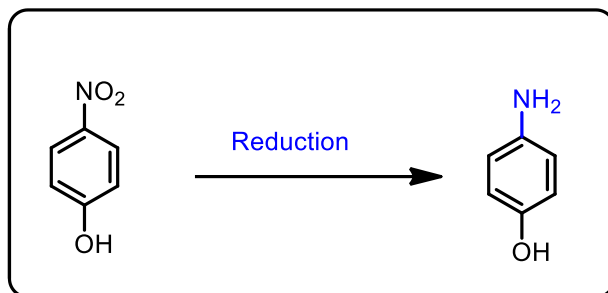
# High resolution mass spectrometry



# IR



### Results:



- Weight of the product calculated (Theoretical yield): 10.9 g
- Weight of the product obtained by the experiment (practical yield) = 9.1 g

$$\% \text{ Yield} = \frac{\text{Weight of the product obtained by the experiment}}{\text{Weight of the product calculated}} \times 100$$

$$\% \text{Yield} = \frac{9.1}{10.9} \times 100$$

$$\% \text{Yield} = 0.83486 \times 100$$

$$\therefore \% \text{Yield} = 83.486\%$$

Handwritten calculation of percentage yield:

$$\% \text{ Yield} = \frac{\text{Weight of the product obtained by the experiment}}{\text{Weight of the product calculated}} \times 100$$
$$\Rightarrow \% \text{ Yield} = \frac{9.1}{10.9} \times 100$$
$$= \frac{91}{109} \times 100$$
$$= 0.83486 \times 100$$
$$\therefore \% \text{ Yield} = 83.486\%$$

Long division calculation:

$$\begin{array}{r} 0.83486 \\ 109 \overline{) 91000} \\ \underline{-872} \phantom{00} \\ 380 \phantom{00} \\ \underline{-327} \phantom{00} \\ 530 \phantom{00} \\ \underline{-436} \phantom{00} \\ 940 \phantom{00} \\ \underline{-872} \phantom{00} \\ 680 \phantom{00} \\ \underline{-654} \phantom{00} \\ 26 \phantom{00} \end{array}$$