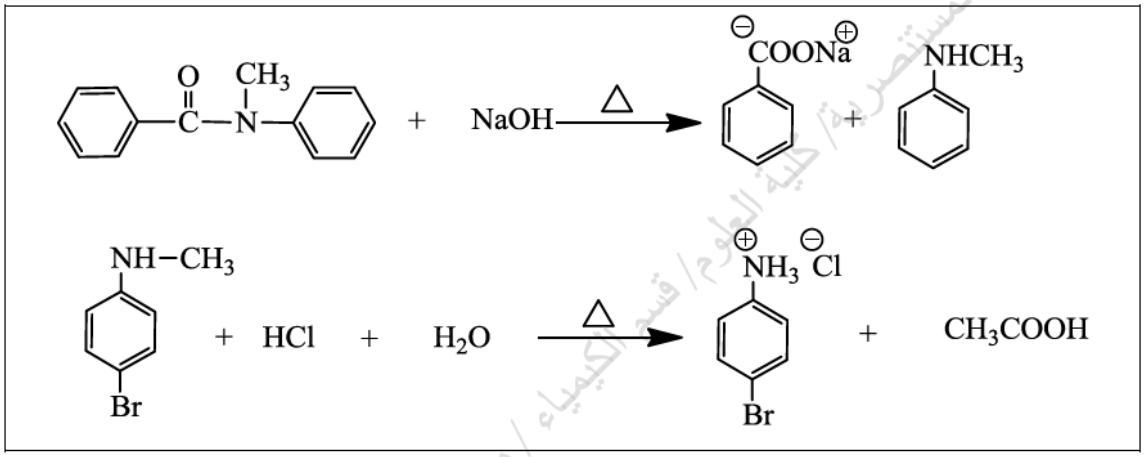
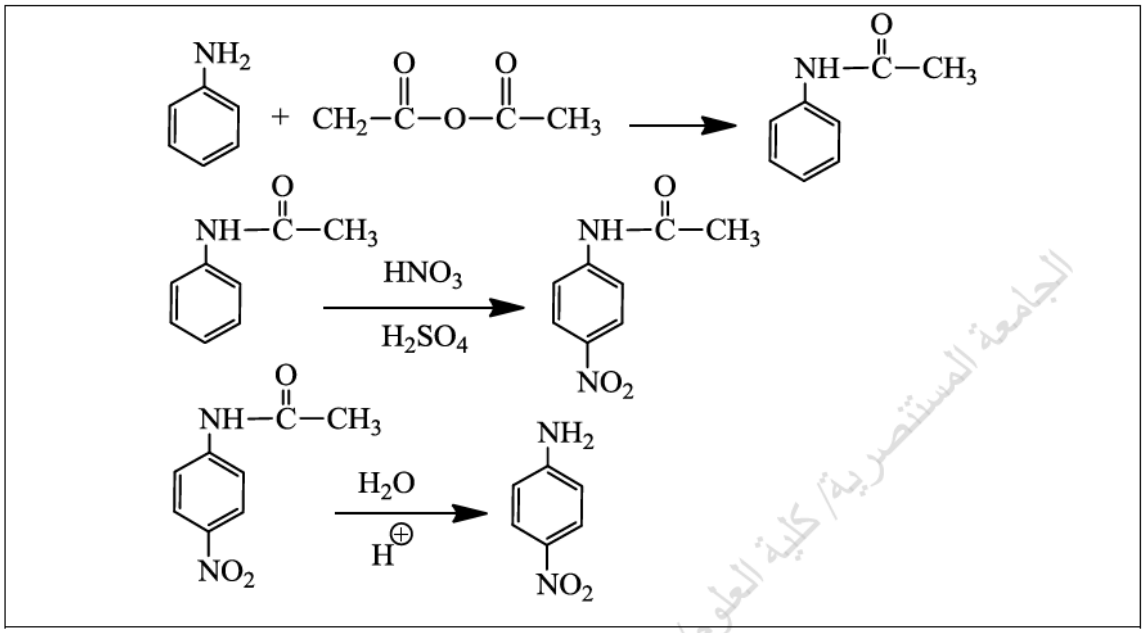
Experiment Twelve

Hydrolysis of P-nitroacetanilide

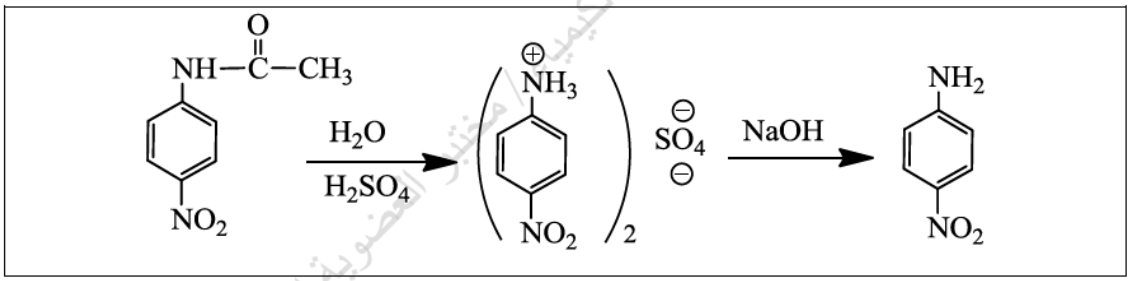
Like simple amides , substituted amides undergo hydrolysis , the product are the acid and the amine although one or the other is obtained as its salt , depending upon the acidity or alkalinity of the medium:



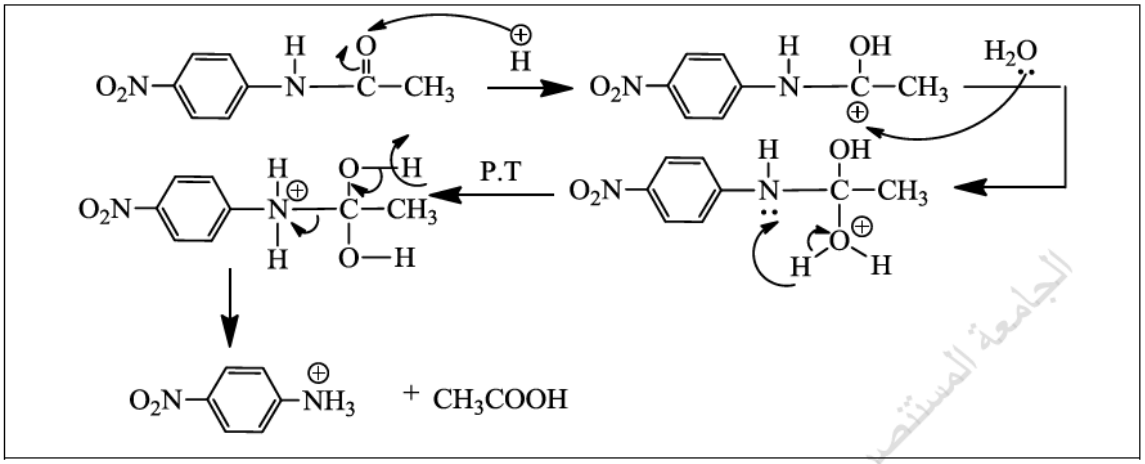
To prepare P-nitroaniline we should follow the steps as shown below :



General Equation:



Mechanism:



Experimental part:

1. In (100ml) round bottomed flask, a mixture of (0.75 gm.) of p-nitroacetanilide , (3.5 ml) of sulfuric acid (30 %) refluxed with stirring for half hour until the mixture become clear.

2. The mixture is poured onto 100 ml ice cooled water and justified with (10 % NaOH) until the precipitate is formed

3. The precipitate is filtered and dried.

4. The product is weighed and the percentage of yield is calculated