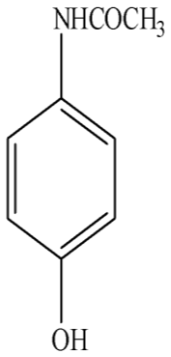
EXPT: 8

PREPARATION OF DRUGS

(PARACETAMOL)

Aim: To prepare and characterize the drug Paracetamol.



Paracetamol

PARACETAMOL (4-hydroxyacetanilide) is another popular medicine, which is very much in use for its analgesic and antipyretic effect.

Materials Required:

Chemicals:

1. *P*-aminophenol
2. Acetic Anhydride

Glassware & other requirements:

1. 100mL Beaker – 2No
2. Measuring Cylinder – 10mL – 1No
3. Measuring Cylinder – 50mL – 1No

4. 100mL RBF – 1No

5. Glass rod -1No

6. Funnel -1No

7. Melting Point Apparatus

8. Water bath

9. Test-tube

10. Suction pump

11. Ice

Preparation of Paracetamol:

Procedure: Take 2.2 g of *P*-aminophenol and about 8 ml of distilled water in a 100 ml round bottom flask and add 2.5 ml of acetic anhydride. Shake the mixture vigorously while warming it in a water bath till the solid dissolves. Cool for 10 minutes and filter the solid product using suction, wash it with cold water, dry in air and note the yield.

Take 0.5 g of the solid in a test tube and dissolve in the minimum amount of distilled water (~2 ml) by warming. Filter the solution to remove any undissolved substance. Cool the solution in ice-cold water to obtain fine crystals of paracetamol. Find out its melting point.

Experimental Readings:

Paracetamol

Amount of p-Aminophenol = g

Amount of Acetic Anhydride = ml

Yield of product = %

Colour of the compound = (crude)

= (Recrystallized)

Melting point of the recrystallized compound =

Recrystallized sample submitted = Yes / No