

Experiment

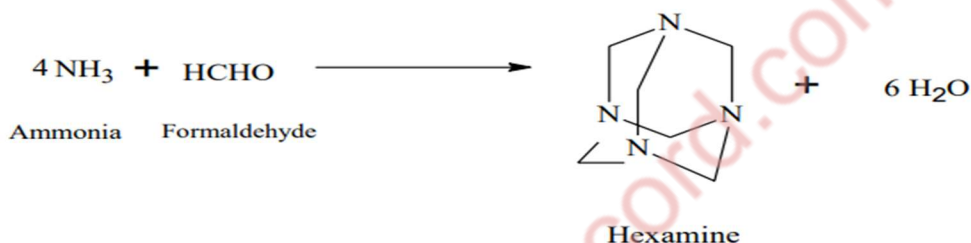
Synthesis of Hexamine

Aim;- To synthesize Hexamine and calculate its percentage yield.

Requirement;-

- **Chemicals-** Formaldehyde, Ammonia Solution, alcohol.
- **Glassware-** round bottom, measuring cylinder, glass rod.

Principle:- Hexamine is heterocyclic organic compound (CH₂)₆N₄. It has symmetrical tetrahedral cage like structure. It is prepared by condensation reaction between formaldehyde and ammonia.



Procedure;-

1. About 4.7g of 30% formaldehyde solution was taken in a beaker and add 7g of 24% ammonia solution, until the solution is slightly alkaline.
2. Then mixture was heated on a water bath for 5 minutes and allowed to stand for 15 minutes.
3. Then solution was filtered and then evaporated on a direct flame using china dish to a thick paste.
4. Then hexamine crystals are obtained and dried. It was recrystallized from alcohol.

Calculation:-

Theoretical yield:-.....g

Practical yield:-.....g

Formula:- % yield = Practical yield/Theoretical yield $\times 100$

Result:- Hexamine was synthesized successfully and percent practical yield was found to be%