

PHARMACEUTICAL ANALYSIS – BP102T

UNIT : II ACID-BASE TITRATIONS AND NON-AQUEOUS TITRATIONS

CLASS:19

TOPIC: ESTIMATION OF SODIUM BENZOATE

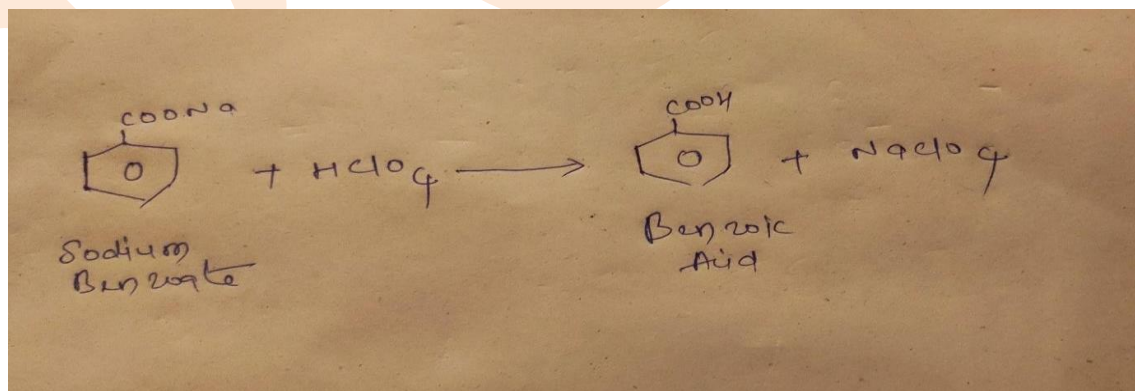
Estimation of sodium benzoate:

Sodium benzoate is white crystalline powder or flakes

It is hygroscopic in nature and is used as pharmaceutical aid (Preservative).

Principle:

It is based on non-aqueous acidimetry titration. Sodium benzoate is acting as weak base, to strengthen this basicity add acetic acid. During titration with strong acid, Acetic acid behave like base and accurate end point is determined. 1-naphtholbenzein indicator is added to get completion of reaction by color change.



Procedure:

- Weigh accurately about 0.25 gm of sodium benzoate and transfer it in a conical flask.

- Add 20 ml of glacial acetic acid in a clean dried conical flask. Mix thoroughly by using sonicator and warm to 50°C if needed.
- Add 2-3 drops of 1-naphtholbenzein indicator and then fill the burette with standardized solution of perchloric acid.
- Titrate the contents of the conical flask with 0.1M perchloric acid which is taken in burette until it reaches the endpoint.
- Record the reading of burette and repeat the titration three times to get precise readings.
- Take mean of them and calculate percentage purity of sodium benzoate.
- Repeat the titration similarly according to above procedure without sodium benzoate for blank titration.

Equivalent factor :-Each ml of 0.1M HClO₄ =0.0144 gm of sodium benzoate