Sr. No. in Scope NABL / NON NABL

**Flow Chart for analysis of Alpha Naphthyl Acetic Acid in formulation**

|  |  |
| --- | --- |
| **Date of Analysis**  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Step**  | **Execution** | **Executed By**  |
| 1. | Sample No. |  |  |
| 2. | Name of Sample |
| 2.1 | Sample description |
| **3.** | **Procedure** | **R1** | **R2** |  |
| **3.1** | **Preparation of Standard solutions 0 .1 N NaOH** |  |  |  |
| 3.1.1 | Weigh 4 g of NaOH and dissolve in water to get 1L standard solution. |  g | g |  |
| 3.1.2 | Note the serial No. in balance logbook |  |  |  |
| **4.** | **Standardization of NaOH:** |  |  |  |
| 4.1 | Weigh 0.42-0.45 g of GR grade Potassium Hydrogen Phthalate in a 250 mL conical flask |  g | g |  |
| 4.2 | *Note the serial No. of balance logbook* |  |  |  |
| 4.3 | Dissolve in 40-50 mL of H20 |  |  |  |
| 4.4 | Titrate against 0.1N NaOH solution in burette using phenolphthalein indicator |  |  |  |
| 4.5 | End point will be colorless to pale pink |  |  |  |
| 4.6 | Titre value for standardization  | mL | mL |  |
| **5.** | **Preparation of Buffer solution** |  |  |  |
| 5.1 | Weigh2.035 g of Citric acid and 2.924 g of Disodium hydrogen phosphate. |  g | g |  |
| 5.2 | *Note the serial No. of balance logbook* |  |  |  |
| 5.3 | Dissolve in water and make up the volume to 200 mL with water |  |  |  |
| **6.** | **Procedure for Alpha NAA** |  |  |  |
| 6.1 | Weigh about 10 g of sample.  |  g | g |  |
| 6.2 | *Note the serial No. of balance logbook* |  |  |  |
| 6.3 | Evaporate the solvent on a water bath to get dry residue of the sample. |  |  |  |
| 6.4 | Add 5 mL water to dissolve the dry residue. |  |  |  |
| 6.5 | Add 50 mL of buffer solution (5.3) and stir. |  |  |  |
| 6.6 | Transfer the solution to a separating funnel quantitatively using 50 mL of Diethyl ether |  |  |  |
| 6.7 | Swirl the mixture and allow the layers to separate. |  |  |  |
| 6.8 | Transfer the aqueous layer to another 250 mL separating funnel and extract with 25 mL of ether twice.  |  |  |  |
| 6.9 | Collect the ether layers of all the three separating funnels into one. |  |  |  |
| 6.10 | Wash the ether layer with water to remove any traces of mineral acid |  |  |  |
| 6.11 | Transfer ether extract to a 500 mL beaker and evaporate to dryness on water bath.  |  |  |  |
| 6.12 | Dissolve the residue in 50 mL neutralized methanol and titrate with standard0.1 N NaOH solution using phenolphthalein indicator  |  |  |  |
| 6.13 | End point for titration is when the color changes from colorless to pale pink. | mL | mL |  |

**7. Calculation:**

 Wt. of KHP X 1000
 Normality of NaOH = ----------------------------------------------------------------------------

 Volume of NaOH consumed X Eq. wt of KHP(204.22)

|  |  |
| --- | --- |
|   V × N ×18.62Active ingredient, = ------------------- % by mass M  | Where, V=Volume in mL of standard NaOH solution consumed for the sample N=Normality of the standard NaOH solution M=Mass in g of the sample taken for test |
|  |

**Result:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of Test** | **Result** | **Unit** | **Method of Analysis** |
| 1. | Active ingredient (Alpha NAA) |  | % | IS 13138:1991 |
| Reference in Daily workbook: |

|  |  |  |
| --- | --- | --- |
| Analyzed by | Name  |  |
| Dated signature |  |
| Checked by | Name  |  |
| Dated signature |  |