ARGENTOMETRY

1. **Preparation of titrant $AgNO_3$**
   Titrant solution $AgNO_3$ is prepared by diluting 25,00 ml of standadised solution of $AgNO_3$ with concentration c = 0,2462 mol/l in 250 ml in volumetric flask.

2. **Preparation of titrant NH_4SCN**
   Calculate the amount of NH_4SCN necessary for preparation of solution with volume $V_{(NH4SCN)}$ = 250 ml and concentration $c_{(NH4SCN)}$ = 0,025 mol/l, $Mr_{(NH4SCN)}$ = 76,125.

3. **Standardisation of titrant NH_4SCN onto a secondary standard of solution of $AgNO_3$**
   The average consumed volume of NH_4SCN from three parallel determinations of 20 ml of standard solution $AgNO_3$ (from task 1) was .... ml. Write the equation and calculate the precise concentration of titrant NH_4SCN.

4. **Determination of Br^-, I^- or SCN^- in the sample (Volhard´s method)**
   Stock solution of sample.....was prepared in 100 ml volumetric flask by weighing about 0,4-0,6 g (precisely.....g) of solid sample and filling up to mark with distilled water. The content of Br^-, I^- or SCN^- was determined by argentometry – Volhard´s method: 50 ml of titrant $AgNO_3$ (from task 1) was added to 20 ml of sample solution in volumetric task. Volume which was consumed during back titration – three parallel determinations was ..... ml of standardised titrant NH_4SCN (from task 3). Write the equations and calculate mass percentage (w/w, %) of the substance ..... in the sample)

Back titration is an analytical chemistry technique which allows the user to find the concentration of a reactant of unknown concentration by reacting it with an excess volume of another reactant of known concentration. The resulting mixture is then titrated back, taking into account the molarity of the excess which was added.