**Required Practical 1**: Making a volumetric solution and carrying out an acid-base titration

Task 1: Prepare 250 cm3 of a 0.1 mol dm-3 solution of sodium hydrogensulfate. Calculate the actual concentration obtained to 3 s.f.

Equipment

* Weighing boat
* 250 cm3 volumetric (graduated) flask
* sodium hydrogensulfate solid
* filter funnel
* spatula
* deionised or distilled water in a wash bottle
* digital mass balance (reading to 2 or 3 decimal places).

Task 2: Determine the concentration of a solution of sodium hydroxide (25 cm3) by titrating using your sodium hydrogensulfate solution.

Equipment

* burette
* stand and clamp
* 25 cm3 pipette
* pipette filler
* 250 cm3 conical flasks
* two 250 cm3 beakers (for rinsing, one for each solution)
* funnel
* wash bottle
* phenolphthalein indicator
* sodium hydrogensulfate solution (150 cm3)
* sodium hydroxide solution (150 cm3)