

# CHEMISTRY

## Lab 7a: AN ANALYSIS OF ASPIRIN TABLETS (without back-titration)

### INTRODUCTION

The aim of this experiment is to determine the percentage of acetylsalicylic acid in aspirin tablets. Sodium hydroxide solution is used to neutralize a known mass of aspirin tablet:



### PROCEDURE

**CARE: Gloves and eye protection must be worn.**

1. Prepare a 100 cm<sup>3</sup> solution of 0.1 mol dm<sup>-3</sup> NaOH by diluting an appropriate amount of a 1.0 mol dm<sup>-3</sup> NaOH solution.
2. Weigh one aspirin tablet.
3. Put the tablet in a beaker, add a stirring magnet and about 75 cm<sup>3</sup> of deionized water. Simmer the mixture gently for ten minutes.
4. Transfer the mixture with washings to a 100 cm<sup>3</sup> volumetric flask and make up to the mark with deionized water.
5. Titrate 20 cm<sup>3</sup> of this solution with the 0.1 mol dm<sup>-3</sup> NaOH solution using an appropriate indicator. First make a rough titration and then at least three more.
6. Calculate the moles and mass of acetylsalicylic acid in an aspirin tablet. What is the mass percentage of acid in a tablet?