

Guidance for Practical 5 – Chapter 1

Determination of vitamin C concentration in a solution

Safety

- Ethanedioic acid is harmful in contact with the skin and if swallowed.
- Potassium iodate is harmful.
- Sulfuric acid is not hazardous at the concentration used.
- Wear eye protection.

Calculation

The calculation here can be quite tricky. If the practical is not to be used for assessment, then weaker students could be given extra help by the use of the following guiding questions.

- 1 Calculate the number of moles of thiosulfate used.
- 2 Work out the number of moles of iodine that the thiosulfate has reacted with.
- 3 Use the volume and concentration of potassium iodate added to calculate the number of moles of molecular iodine produced.
- 4 Calculate the number of moles of iodine that reacted with the vitamin C.
- 5 Calculate the number of moles of vitamin C in 25.0 cm^3 of the solution and hence the concentration of the vitamin C solution.