Sources of information

Textbooks/Websites

Textbooks
Hill, G and Holman, J. (2000), Chemistry in Context, Walton on Thames, Nelson

Useful Websites
www.chemguide.co.uk All purpose level 3 Chemistry website
www.webelements.com Periodic Table on the Web
www.chemsoc.org The Royal Society of Chemistry’s Chemical Science network
www.chemdex.org The Directory of Chemistry
• Make sure the meniscus of liquid is perfectly on the line.
• As you are approaching the end point add drop by drop for precision. Ask partner opinion.

According to the result of the experiment li can be said that in the experimentment must been some error have occurred which changed the end result of the experiment but none experiment can be done 100% accurately no matter how good apparatus or chemical get use. Therefore ensure accuracy of the result of the experiment, the experiment must be repeated and to get result more accurately automation can be use.

**Conclusion**

The accuracy of the experiment was not 100% but it was. It is poor as well because it is nearly impossible to do any experiment without any error. There will be no experiment with 100% accuracy but it is also important try to minimise the errors.

If my results were to be used by a chemical company I will prepare the solution in different way where automation will be used to ensure accuracy.
### Electronic Structure

1. List some of the evidence for the existence of electrons in atoms.

2. Fill in the following table for the elements: Li, Be, B, C, N, O, F, Ne.

<table>
<thead>
<tr>
<th>Element</th>
<th>Electronic Structure in sub-shell notation</th>
<th>No of principal quantum shells</th>
<th>No of outer electrons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Li</td>
<td>$2s^2 2s^1$</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Be</td>
<td>$1s^2 2s^2$</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>$1s^2 2s^2 2p$</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>$1s^2 2s^2 2p^2$</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>N</td>
<td>$1s^2 2s^2 2p^3$</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>O</td>
<td>$1s^2 2s^2 2p^4$</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>F</td>
<td>$1s^2 2s^2 2p^5$</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Ne</td>
<td>$1s^2 2s^2 2p^6$</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

Explain how:

1. i. the number of principal quantum shells and
2. ii. the number of outer electrons of each element determine where the element is placed in the Periodic Table.

1. The amount of quantum shells is the same as the number of the period.
Titration and its used:

Titration is a procedure or method to ascertain the concentration of a substance in an unfamiliar resolution, in that a recognized reagent is added to an unfamiliar resolution to produce a recognized reply such as a change in color or mechanical measurement. As it is extra usually associated alongside elevated school chemistry labs, medicine and the science industry, countless public items use titration to examination for the attendance of assorted substances.

A titration is a method whereas a resolution of recognized compression is used to ascertain the compression of an unfamiliar solution. Typically, the titrant (the understand solution) is added from a buret to a recognized number of the analyte (the unfamiliar solution) till the reply is complete.

A titration is a measurement to ascertain a concentration. Those can be completed offline (meaning they seize a example and next do the titration in a lab - precisely the alike as you do it

The concentrations of materials are ambitious in a disparate method (pH, gas chromatography, hplc, etc). and if a plant is easy, next a good design way that there is no demand to do too many checks. Quality control at the end of the production line is sufficient then.

Blood sugar testing:
Diabetics can measure the amount of glucose in their blood by using a small portable machine called a blood glucose meter. To use the machine, a small sample of blood is applied to a test strip and mixed with reactants, then a small electrical current is applied to the sample. The current is affected by the concentration of the reactants and can then be used to measure the amount of glucose present in the blood.

Titration Problems

In titration, one resolution is added to one more resolution till a chemical reply amid the constituents in the resolutions has run to completion. Resolution 1 is shouted the titrant, and we say that it is utilized to titrate resolution 2. The completion of the reaction is normally shown by a change of color provoked by a substance shouted an indicator.
A specific volume of the resolution to be titrated (solution 2) is dispensed into an Erlenmeyer flask. For example, 25.00 mL of a nitric acid resolution of unfamiliar compression could be added into a 250 mL Erlenmeyer flask.

A resolution of a substance that reacts alongside the solute in resolution 2 is added to a buret. (A buret is a workshop instrument utilized to add measured volumes of resolutions to supplementary containers.) This resolution in the buret, that has a recognized concentration, is the titrant. The buret is set up above the Erlenmeyer flask so the titrant can be added in a compelled manner to the resolution to be titrated. For example, a 0.115 M NaOH resolution could be added to a buret, that is set up above the Erlenmeyer flask encompassing the nitric acid solution.

Titration is utilized in stacks of industries. Its utilized in wineries, dairy farms, excavating firms, cleaning physical manufacturers, juce makers, food makers, cosmetic industries, condition industries, water plants, paint makers and stacks more. Pretty far each industry that relies on something that has a pH justification. Normally it is utilized as a method to make sure that something’s pH is suitable for human consumption or for human to be close to. Though, it is additionally utilized to make sure that produce, such a cleaning produce, remove bacteria. Cleaning produce demand to be somewhat rancid for these produce to work so they titrate to become the right molarity.

REFERENCE:

http://www.scienceforums.net/topic/53349-titrations-are-done-in-industry/
http://preparatorychemistry.com/Bishop_Titration.htm
http://www.bbc.co.uk/schools/gcsebitesize/science/triple_ocr_gateway/how_much/titrations/revision/1/