

Starter

Why have you chosen Applied Science?



Learning objectives:

- To gain an understanding of the requirements of your chosen subject in preparation for a September 2023 start

Learning objectives

- ❑ To gain an understanding of the requirements of your chosen subject in preparation for a September 2025 start

Key words:

Preparation
Organisation
Punctuality
Commitment
Success



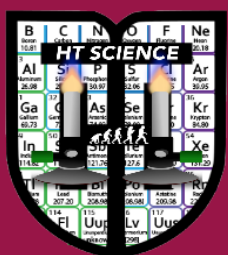
Learning objectives:

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Explanation

Welcome to Applied Science

In this session you will be working in pairs, carrying out a precise method of measuring that is used in chemistry and you will also be using during your course.



Learning objectives:

Explanation

Core Expectations for **Every Lesson**

1. Attend lessons on time and in professional attire
2. Be prepared for each lesson by ensuring you bring the appropriate equipment
3. Ensure all work is organised in the appropriate section of your subject folder
4. All deadlines must be met to avoid a 6 week “Risk of Failure” program
5. Respect the classroom, Replace chairs, Rubbish in bins
6. Speak to **ALL** members of the HT community with respect
7. No mobile phones/ear pods to be used in lessons or around the school
8. Starters are to be completed in silence
9. Be proactive and not reactive
10. Expect to work harder than you ever have before



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Explanation



You may have looked at titrations to deduce the concentration of acids or bases.

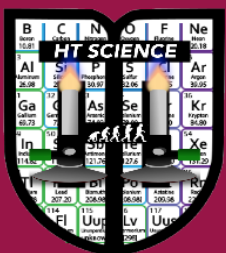
Today you are going to use a titration to find out which sweet is the most sour.



The sweets that have the sourest taste have higher levels of acids to trigger the sour areas of the taste buds

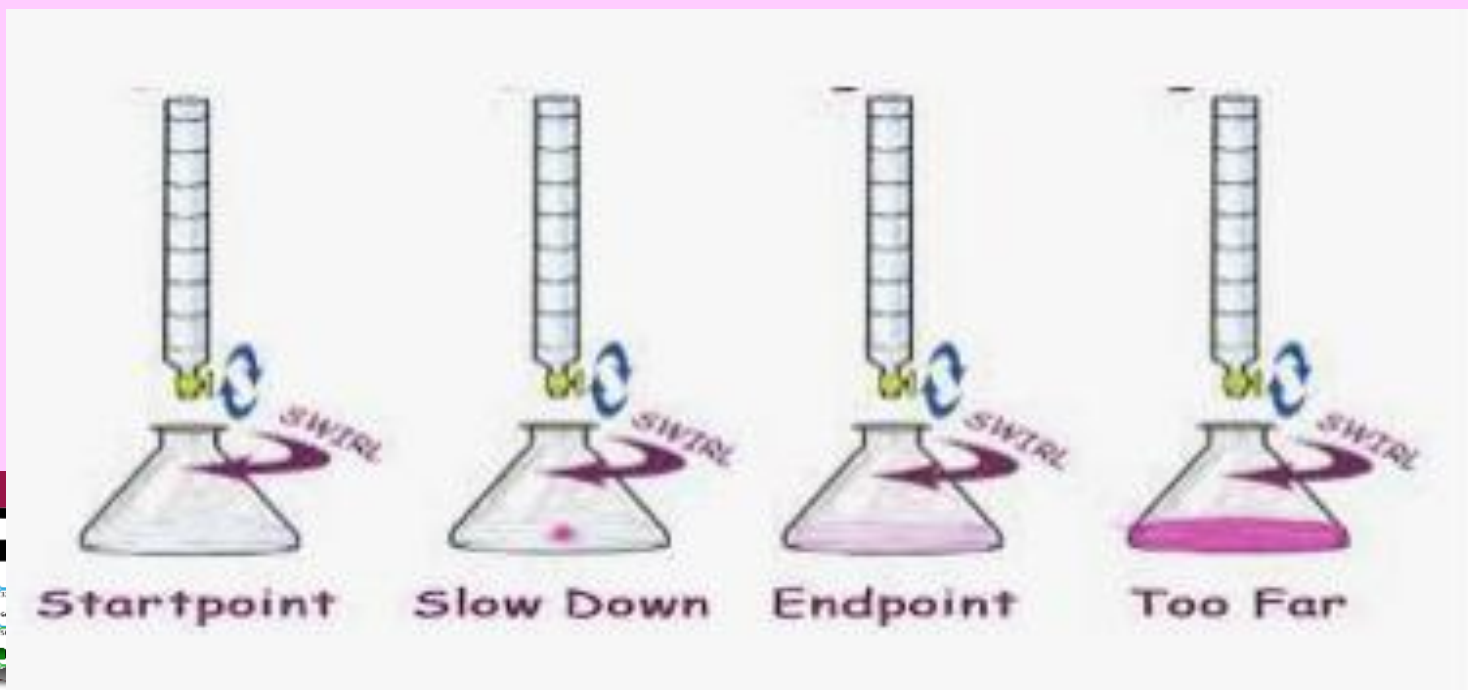


Learning objectives:



Explanation

Titration is carried out to get precise results.
How can you be precise with your equipment and technique.



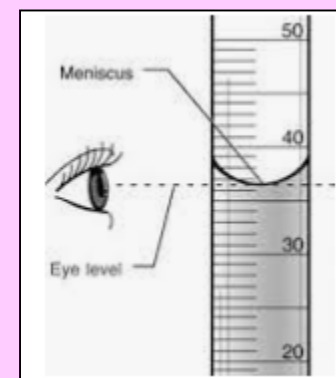
You will work in groups of 2

We will collect group results to compare with each other.

Clamp to hold burette

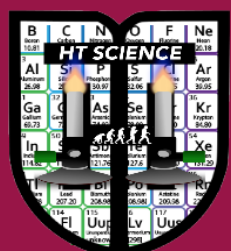
Burette with NaOH (alkali)

Flask with sweet solution



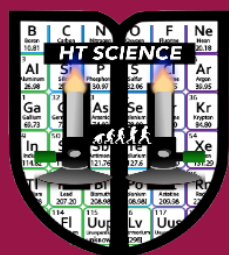
Learning objectives:

White tile to see colour change



Method

- 1) Choose one brand of sweet- same colour. Cut each one into approx. 1cm cubes and weigh out approximately 10g. Record the mass.
- 2) Add sweets to the Glass beaker
- 3) Measure 50cm³ of distilled water and add to the glass beaker.
- 4) Stir and place the beaker in the water bath, for 5 minutes.
WHILST YOU WAIT
- 5) Fill the burette to 0.00 with NaOH and record this as initial volume of NaOH
- 6) Remove the beaker from the water bath and use the needles to remove the sweets from the solution.
- 7) Transfer the solution to a conical flask.
- 8) Add 3-4 drops of phenolphthalein indicator into the flask.
- 9) **Slowly** add the NaOH from the burette into the flask until the indicator changes into a **permanent faint** pink color.
- 10) Record the final volume of the NaOH used in the titration in the data table below.
- 11) Repeat the process with a different brand of sour sweet. Use the same mass.



Learning objectives:

Checking Progress

The sweet that needed the highest volume of NaOH to neutralise it is the one that is most acidic (sour)

Data Table.

Brand and <u>colour</u> of sweet	Mass of sweet/g	Initial Volume of NaOH (burette)/cm ³	Final Volume of NaOH/cm ³	Volume of (NaOH) used/cm ³	Rank sourness 1 highest

How reliable are your results?

