

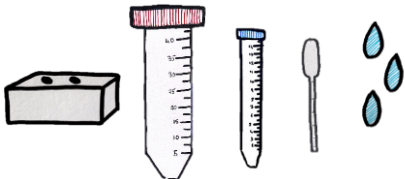
SCIENTIFIC SKILLS

WHICH INSTRUMENT WORKS BEST TO MEASURE DIFFERENT VOLUMES?



You Will Need:

- Cardboard test-tube rack
- 50 mL Tube
- 15 mL Tube
- Plastic Pipette
- Water



1. Pour water into the 15 mL tube until it reaches 6 mL.

2. Using the pipette, how many drops does it take to add 1 mL of water to the 15 mL tube? Try not to let any air bubbles get in the pipette when collecting the water!



3. Pour the 7 mL of water into the 50 mL tube.



4. Find out how many 7 mL portions of water from the 15 mL tube does it take to fill the 50 mL tube to 35 mL?



5. Which pieces of equipment would you choose to measure these volumes?

- 1 mL
- 6 mL
- 25 mL



Answers to questions:



Roughly 25 drops.



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- Pipette.
- 15 mL tube.
- 50 mL tube.

- A pipette is used to measure or transfer volumes of liquid in very small amounts.
- The 15 mL tube is useful in measuring and containing smaller volumes from 2-15 mL.
- The 50 mL tube is good for measuring and containing larger volumes, from 5-50 mL.

Scientists need to get the most reliable results when carrying out experiments. To do this, things must be measured out carefully and accurately. **ACCURACY** describes how close a measurement is to its **TRUE VALUE**. This means how close something can be measured to the exact amount needed without **ERROR**. In experiments, error leads to false, misleading or inaccurate results. This is why it is important to choose the correct tool when measuring volumes.

What do I need this for?

We need to be accurate every day. For example, in baking or cooking you must measure or weigh out ingredients correctly to make sure the results are successful and the food tastes good!

What instruments of measurement are used when baking?

Did you know?



In ancient Ireland, the shell of a chicken's egg was used as a unit of volume, roughly 55 mL.