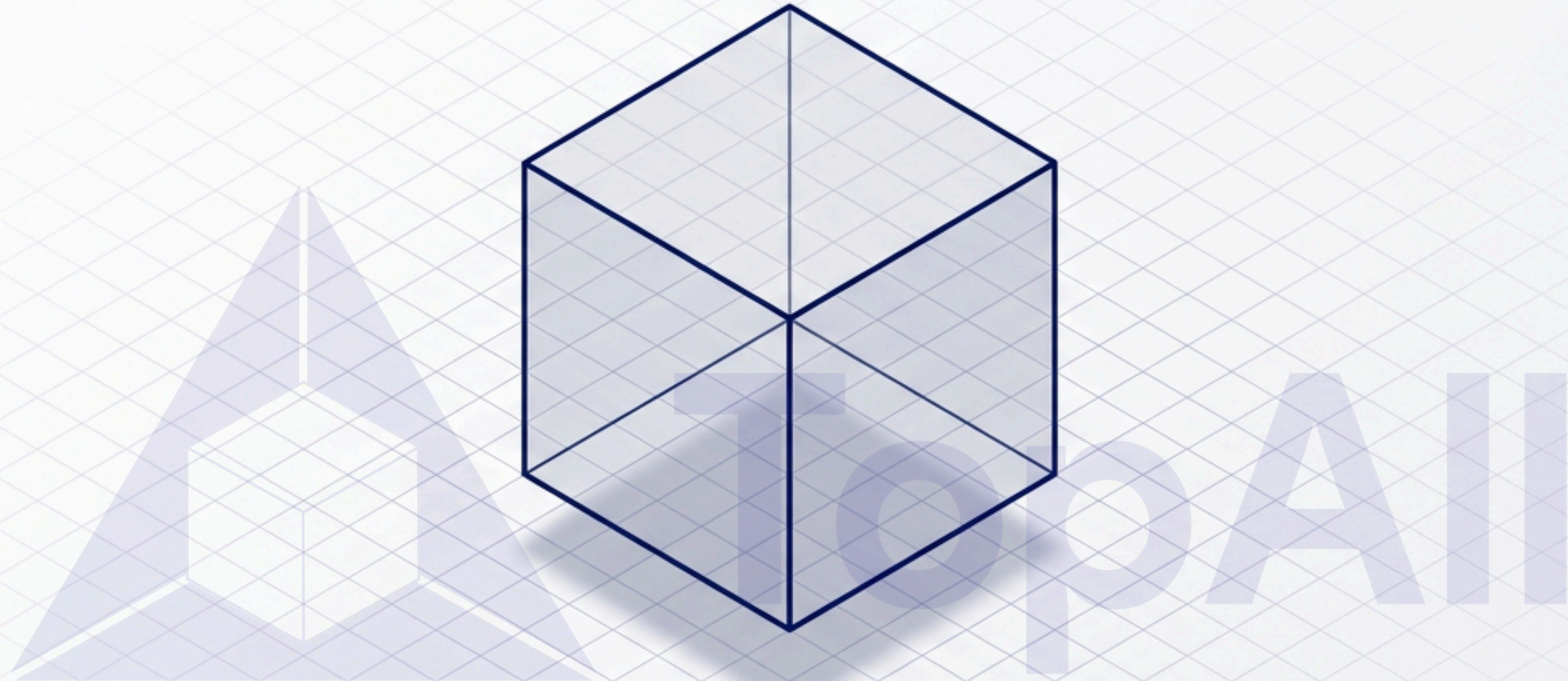
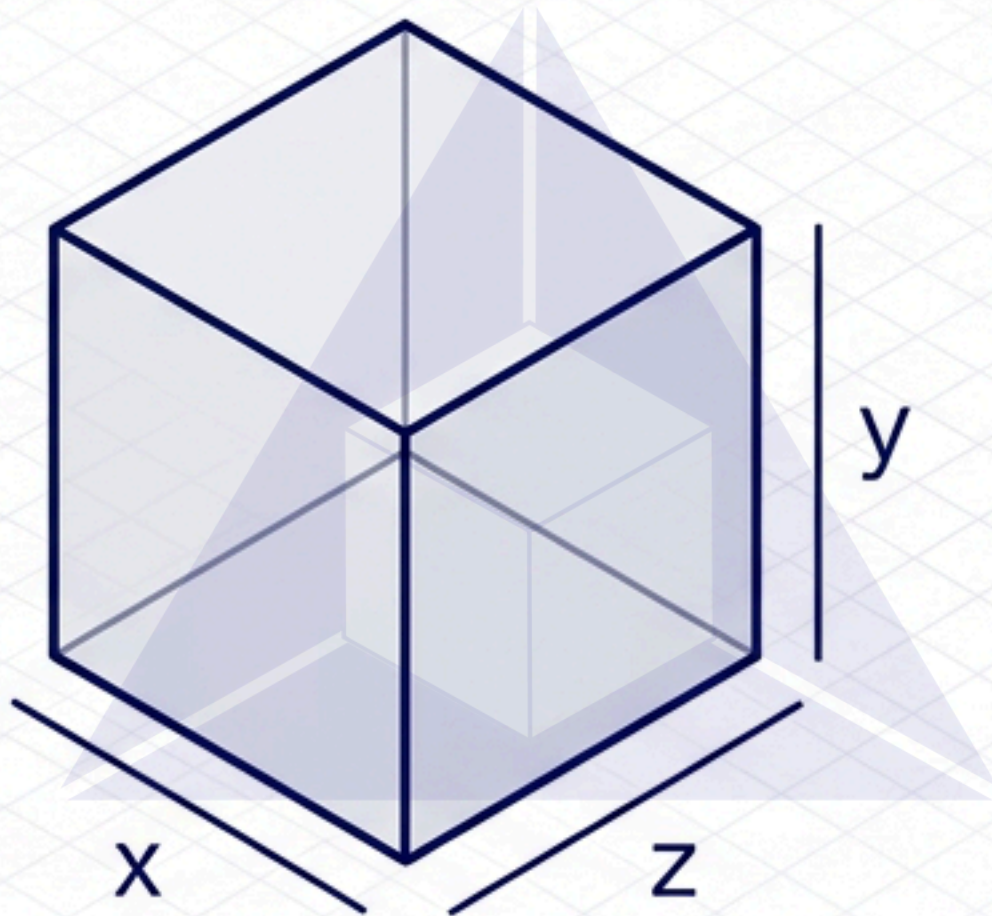




# Volume: Space Occupied by Matter

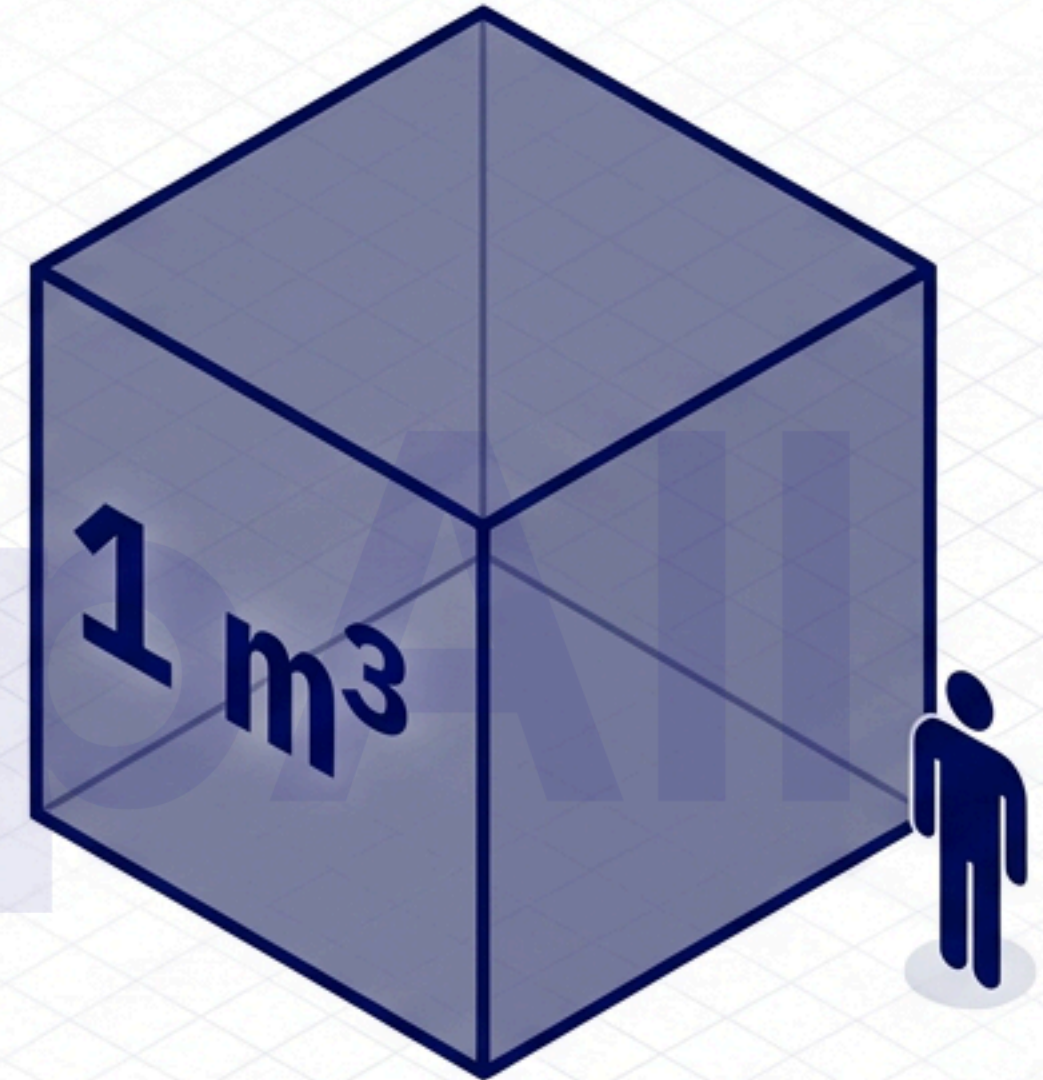
A practical transition from mathematical theory to chemistry lab measurement.

## The Mathematical Definition



$$\text{Volume} = \text{length}^3$$

## The SI Unit



Derived from the base SI unit of length (metre).

# The cubic meter ( $\text{m}^3$ ) is far too large for standard laboratory chemical reactions.



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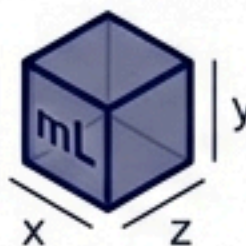
Cubic decimeter  
( $\text{dm}^3$ )



Cubic centimeter  
( $\text{cm}^3$ )



Milliliter  
(mL)



**ALERT:** The Litre (L) is the most common unit for measuring liquid volume in the lab, but it is not an official SI unit.



# You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



Turn theory into marks with **unlimited MCQs, smart analysis, and focused revision.**

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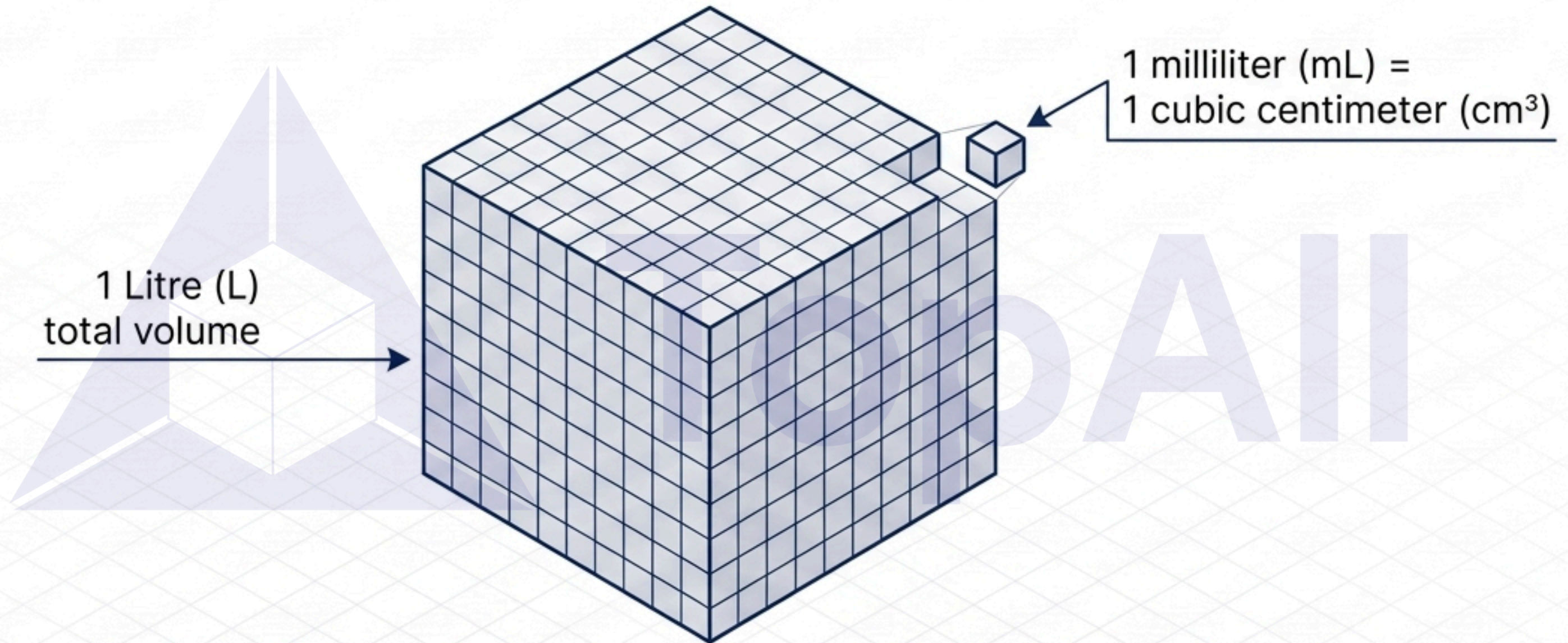
At [prep.topall.app](https://prep.topall.app)

## Key Highlights

- » Free Study Material, Videos & Infographics
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- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



# Precision Blueprint



$$1 \text{ L} = 1000 \text{ mL} = 1000 \text{ cm}^3 = 1 \text{ dm}^3$$

## The Physical Lab Tools



**Graduated  
Cylinder**

General measurement.



**Burette**

Precise liquid  
dispensing.



**Pipette**

Accurate liquid  
transfer.



**Volumetric Flask**

Preparing precise  
known volumes.

Primary Function

High

Relative Accuracy



**Burette**



**Pipette**



**Volumetric  
Flask**



**Graduated  
Cylinder**

Moderate

Transferring /  
Dispensing

Containing /  
Preparing

## Key Takeaway: The Principle of Selection

Always choose your glassware based on the specific accuracy required by your chemical reaction.



Use Volumetric Flasks when preparing standard solutions.



Use Burettes/Pipettes for exact titrations and transfers.



Use Graduated Cylinders for routine, approximate measurements.





# You've Learned the Theory.

## Now Let's Test It.

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