

**Physical Quantities and their related S.I Units and Basic Conversion**

Physical Quantity	S.I Unit	Conversions
Mass	kilogram (kg)	1kg = 1000g 1 tonne = 1000kg
Time	second (s)	1h = 60mins 1min = 60s
Temperature	Kelvin (K)	Degrees (K) = Degrees in Celsius + 273
Volume	Cubic metre (m <sup>3</sup> )	1m <sup>3</sup> = 1000dm <sup>3</sup> 1dm <sup>3</sup> = 1000cm <sup>3</sup>

**Physical Quantities and the Apparatus used**

Physical Quantity	Apparatus Name	Degree of Accuracy
Mass	Beam Balance	±0.05g
	Electronic Balance	±0.01g
Time	Stopwatch (Analogue)	±0.1s
	Stopwatch (Digital)	±0.01s
Temperature	Mercury/Alcohol in-glass thermometer	±0.5°C
	Data Logger with Temperature Sensor	Undefined (more accurate)
Volume (Liquid)	Measuring Cylinder	nearest 0.5cm <sup>3</sup>
	Burette	nearest 0.05cm <sup>3</sup>
	Pipette	Fixed Volumes
Volume (Gas)	Gas Syringe	nearest 1cm <sup>3</sup>

**Chemicals used for drying Gases**

Drying Reagent Name	What it cannot dry
Concentrated Sulfuric Acid	Alkaline gases
Quicklime	Acidic Gas
Fused Calcium Chloride	-

**Methods of Gas Collection**

- Gas is insoluble in water -> Displacement of water
- Gas is soluble in water and relative Mr of gas less than 28 -> Upward Delivery
- Gas is soluble in water and relative Mr of gas more than 28 -> Downward Delivery

