No.: Date:

Chemistry practical impt. notes:

Burette

⇒ 2 d.p.

e.g. 23.50, 23.55

Temperature

⇒ 1 d.p.

e.g. 28.0, 28.5

* Even in temp. calculation put 1 d.p.

e.g. 31.0 - 28.0 ≠ 3

31.0 - 28.0 = 3.0

Electronic balance

⇒ 2 d.p.

e.g. 36.30g, 57.51g

Calculation answers

⇒ 3 s.f.

Graphs

⇒ Start at origin

⇒ NO awkward scales

⇒ Line of best fit; points must be equal distance away from line

⇒ ONLY one point can be declared anomally (circle it)

⇒ axis labels to be spelled out in full

e.g. vol. of B ✗

volume of B ✓

Drawings (of experiments etc.)

⇒ Draw proportionally

⇒ LABEL diagram

⇒ No need to draw perfectly but make sure examiner can make out what you are drawing.

No.: ..... Date: .....

Tables

⇒ use a simple table like in the textbooks

e.g.

m...	g..	...

X

	m	A	B
mass...			
temp...			
metal...			
elect...			

✓

test for gases

Name: Reg No: Date:

- Anything with metals → H_2 (g)
- Hydrogen peroxide → mostly O_2(g)

- Powder → Heat = carbonate, CO_3^{2-}
- ☆ Any colour powder still test for CO_3^{2-} → Add acid = carbonate, CO_3^{2-}

- Anything add sodium hydroxide and warm → NH_3 (g), Ammonia.

- Aluminium foil + sodium hydroxide + warm → NH_3 (g)
- oxidising & reducing agents:
  - H_2O_2 (Both)
  - KI (reducing agent)
  - $KMnO_4$ (oxidising agent)

☆ Unlikely to come out

- NO_3 + SO_4 → NO_2 + (O_2) ← test for

Nitrate → NO_2 + (O_2) ← test for

☆ Whenever there is ammonium, NH_4^+, always test for ammonia.

↳ e.g. NH_4^+ + aqueous sodium hydroxide + warm → NH_3 (g) (test for)

☆ Whenever there is carbonate, CO_3^{2-}, always test for carbon dioxide

↳ e.g. $CuCO_3$ → CuO + (CO_2) ← test for

Name: Reg No: Date:

★ Impt Note !

- $CuCO_{3(s)} \rightarrow CuO_{(s)} + CO_{2(g)}$

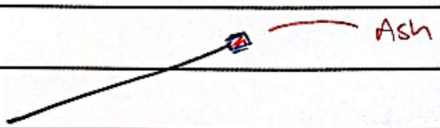
green solid — black solid

- $ZnCO_{3(s)} \rightarrow ZnO_{(s)} + CO_{2(g)}$

white solid — yellow when hot, white when cool

★ Note !

Lighted splint

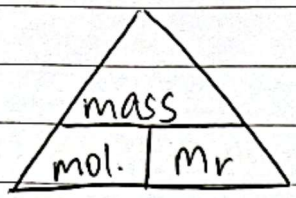


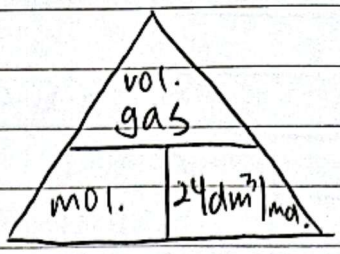
Glowing splint

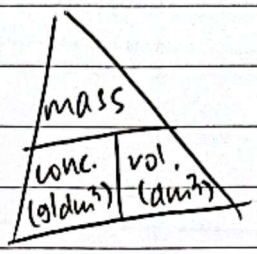
Indicators.

Indicator	Acidic	pH range for colour change	Alkaline
Methyl orange	Red	3 – 5	Yellow
Screened methyl orange	Violet	3 – 5	Green
Litmus	Red	5 – 8	Blue
Bromothymol Blue	Yellow	5 – 8	Blue
Phenolphthalein	Colourless	8 – 10	Pink

Formulas.

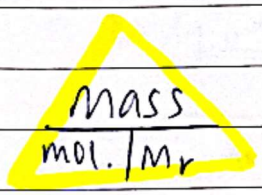


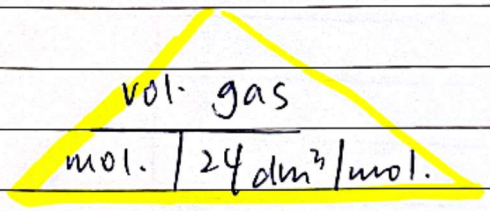


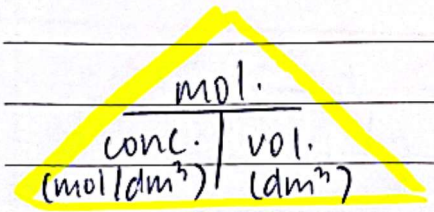


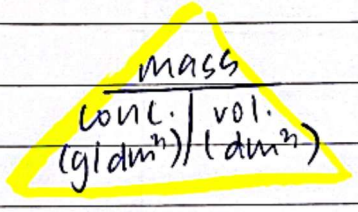
$$\% \text{ purity} = \frac{\text{actual mass}}{\text{theoretical mass}} \times 100\%$$

$$\% \text{ yield} = \frac{\text{actual yield}}{\text{theoretical yield}} \times 100\%$$









Tables.

Titration:

☆ Record readings in 2 d.p.

Titration number	1	2	3
Final Burette reading / cm^3			
Initial Burette reading / cm^3			
Volume of ___ used / cm^3			
Best titration result (✓)			

☆ Use pencil only to draw the table, the rest use pen.

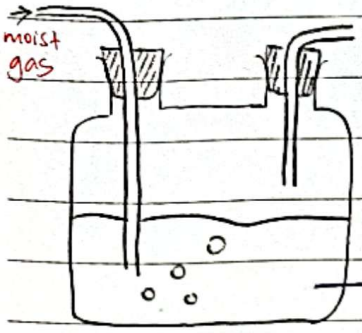
Mass reading table:

mass of empty crucible / g		
mass of crucible + contents / g		
mass of crucible + contents after heating / g		

☆ Use pencil only to draw the table, labelling use pen.
☆ Record mass in 2 d.p.

Drying gases

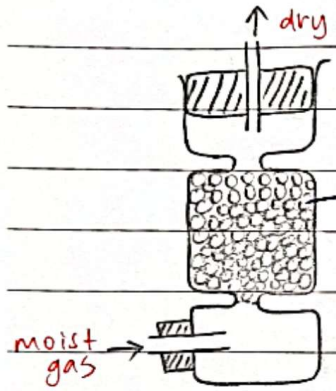
Acidic gas:



☆ non-metal oxides = acidic (usually)

☆ only use to dry acidic gases, including chlorine gases.

Alkaline / basic gases:

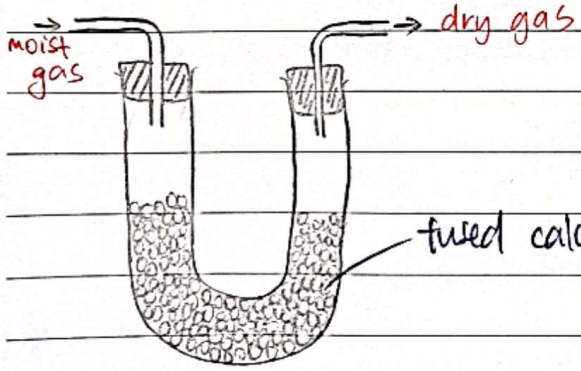


☆ Ammonia, $NH_3(g)$ → basic gas

☆ metal oxides = basic (usually)

☆ only use to dry basic/alkaline gases, especially ammonia.

Most gases:



☆ use for most gases EXCEPT ammonia, HCl, CO_2, SO_2

Neutral gases: Noble gases, H_2, N_2, O_2

☆ Neutral gases can use any of the 3 to dry.