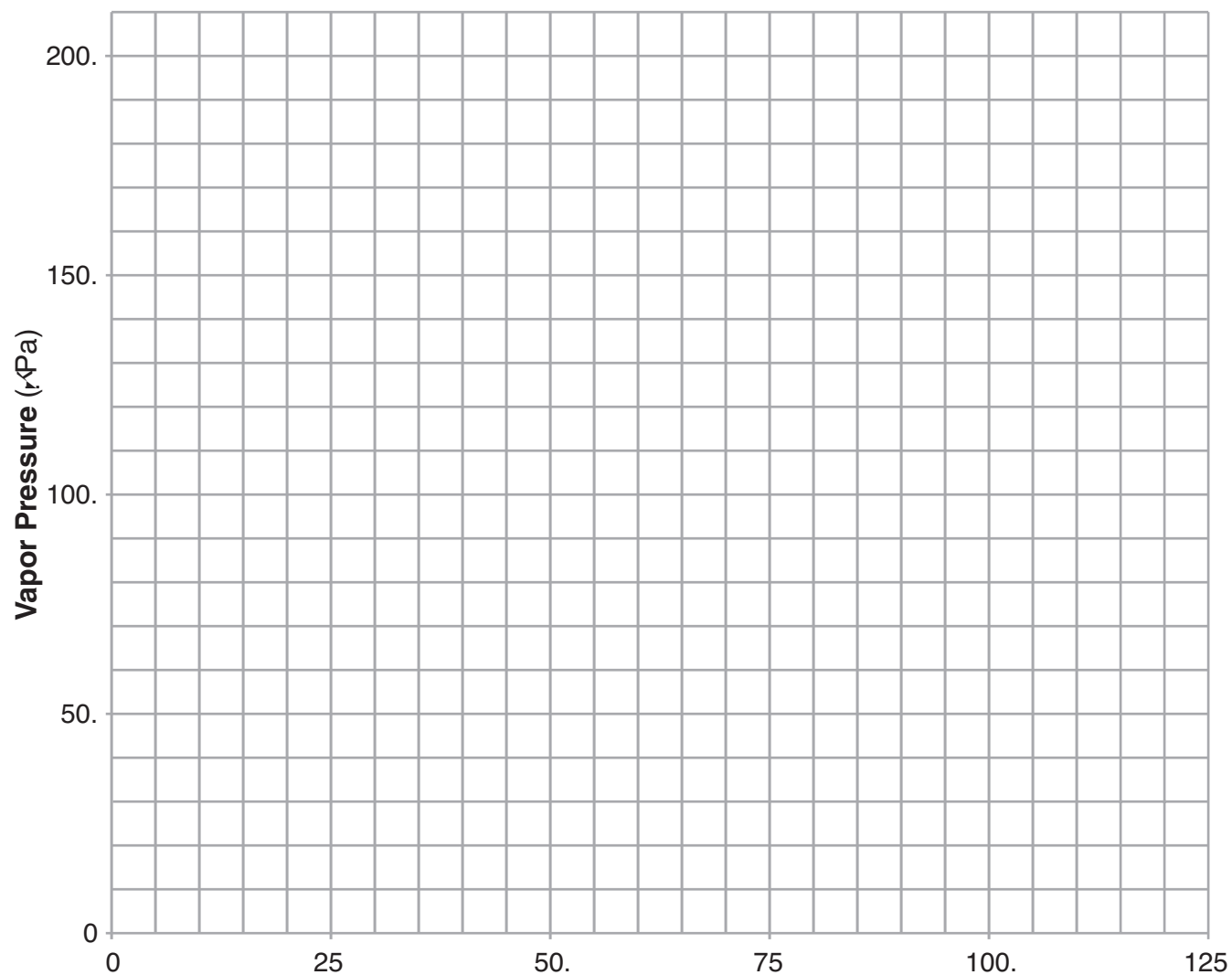


Ions That Form <i>Soluble</i> Compounds	Exceptions
Li^+ , Na^+ , K^+ , NH_4^+	
NO_3^- , ClO_4^-	
Cl^- , Br^- , I^-	

Table H
Vapor Pressure of Four Liquids



Reaction	ΔH (kJ)*
$\text{C}_2\text{H}_2 + 2\text{H}_2 \rightleftharpoons \text{C}_2\text{H}_6$	-226.7

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Table K
Common Acids

Table N

Table L
Common Bases

Table O

Name	General Formula	Examples	
		Name	Structural Formula
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$		$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$	
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$		$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$	
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$		$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$	

Table R
Organic Functional Groups

Class of Compound	Functional Group	General Formula	Example
		R	
		R	
		R	
		R R'	
		R R'	

Periodic Table of the Elements

Table S
Properties of Selected Elements

Atomic Number	Symbol	Name	First Ionization Energy	Electro-negativity	Melting Point	Boiling Point	Density**	Atomic Radius
1		Hydrogen	1312	2.20	-259	-253	0.08988	37
2		Helium	2372		-272	-269	0.17847	31
3		Lithium	520	0.98	180	1610	0.534	152
4		Beryllium	900	1.57	1287	2742	1.848	112
5		Boron	801	2.04	2319	2550	2.35	85
6		Carbon	1086	2.55	3500	4827	2.267	70
7		Nitrogen	1402	3.04	63	196	1.026	65
8		Oxygen	1314	3.44	-218	-183	1.429	60
9		Fluorine	1681	3.98	-219	-188	1.681	51
10		Neon	2081		-249	-246	0.9002	38
11		Sodium	419	0.93	97.8	1146	0.971	186
12		Magnesium	738	1.31	923	1412	1.738	137
13		Aluminum	578	1.61	933	2543	2.70	118
14		Silicon	786	1.90	1685	3570	2.33	111
15		Phosphorus	1012	2.19	44.2	281	1.82	106
16		Sulfur	1000	2.58	119	444.6	2.07	103
17		Chlorine	1251	3.16	-101	-34	3.127	99

Atomic Number	Symbol	Name	First Ionization Energy	Electro-negativity	Melting Point	Boiling* Point	Density**	Atomic Radius
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Elements 58–71 have been omitted.								
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Elements 90 and above have been omitted.								

* *Handbook of Chemistry and Physics*, 91st ed., 2010–2011, CRC P
 ** *Handbook of Chemistry and Physics*, 91st ed., 2010–2011, CRC P

Table T
Important Formulas and Equations

Density	$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$
Mole Calculations	$\text{Moles} = \frac{\text{Mass}}{\text{Molar Mass}}$
Percent Error	$\% \text{ Error} = \frac{ \text{Experimental Value} - \text{Theoretical Value} }{\text{Theoretical Value}} \times 100$
Percent Composition	$\% \text{ Composition} = \frac{\text{Mass of Element}}{\text{Total Mass}} \times 100$
Concentration	$\text{Molarity} = \frac{\text{Moles of Solute}}{\text{Volume of Solution (L)}}$
	$\text{Molality} = \frac{\text{Moles of Solute}}{\text{Mass of Solvent (kg)}}$
Combined Gas Law	$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$
Titration	$M_A V_A = M_B V_B$
Heat	$Q = C \Delta T$ $Q = H_f$ $Q = H_v$ $C = \frac{Q}{m \Delta T}$ $\Delta T = \frac{Q}{m C}$
Temperature	$T(^{\circ}\text{C}) = T(^{\circ}\text{F}) - 32$