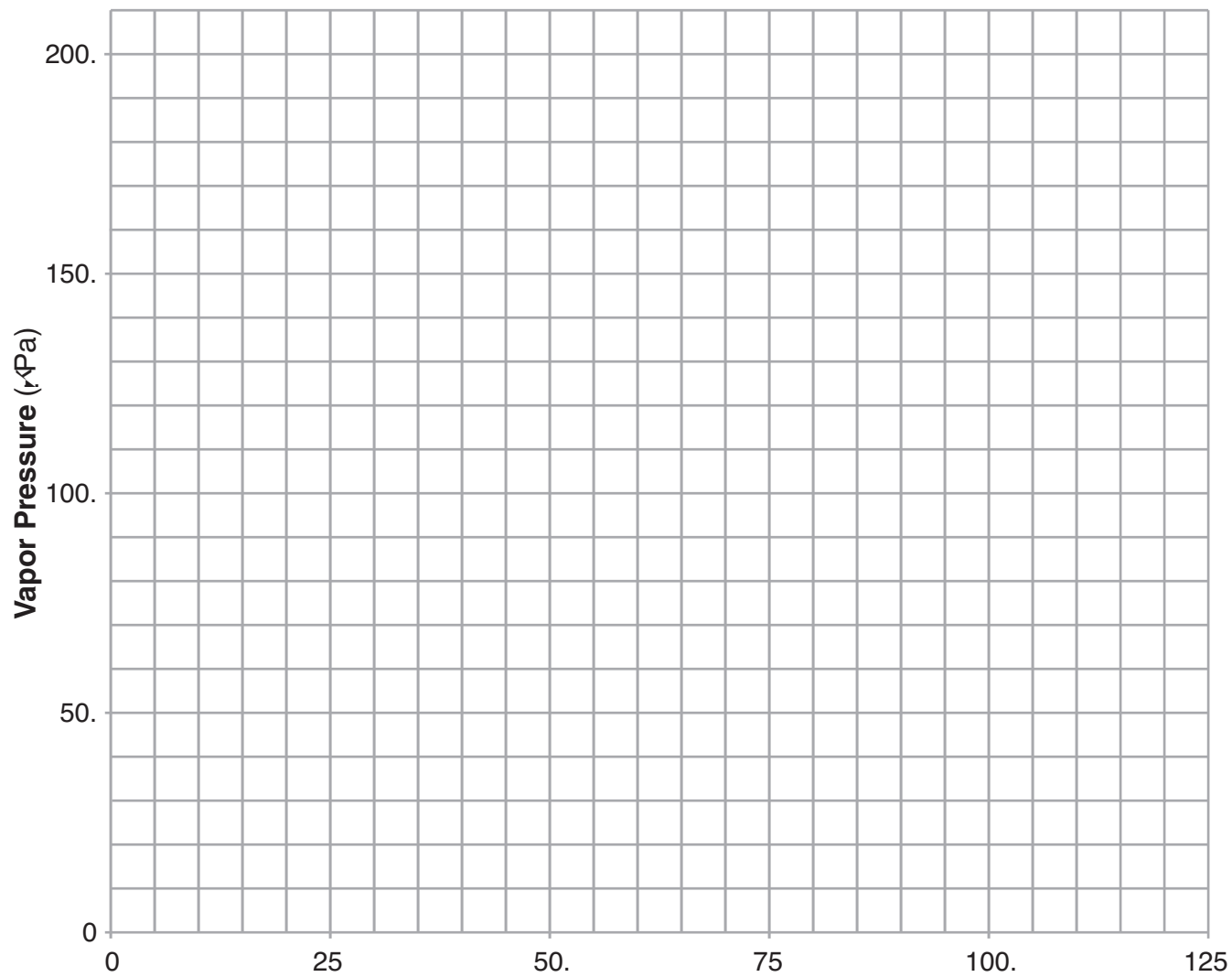




<b>Ions That Form <i>Soluble</i> Compounds</b>	<b>Exceptions</b>
$\text{Li}^+$ $\text{Na}^+$ $\text{K}^+$	
$\text{NH}_4^+$	
$\text{NO}_3^-$ $\text{ClO}_4^-$	



**Table H**  
**Vapor Pressure of Four Liquids**



**Table I**  
**Heats of Reaction at 101.3 kPa and 298 K**

Reaction	$\Delta H$ (kJ)*
<div style="text-align: center; margin-top: 20px;"> </div>	

**Table J**  
**Activity Series\*\***


**Table K**  
**Common Acids**

**Table N**

**Table L**  
**Common Bases**

## Table O

Name	General Formula	Examples	
		Name	Structural Formula
/ / /		/ / /	
/ / /		/ / /	
/ / /		/ / /	

**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

Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	1.00794 1 <b>H</b> 1																		4.00260 2 <b>He</b> 2

**KEY**

A I Ma → ← S O i a i . S a  
S → R a a a i a a a a  
A I N → Note: N i a a  
E C i a i → a a

12.011	-4	+2	+4
<b>C</b>			
6			
2-4			

Group

6	2-4
<b>C</b>	
6	
2-4	

2	6.941 3 2-1 <b>Li</b> 3	+1 4 2-2 <b>Be</b> 4																		
3	22.98977 11 2-8-1 <b>Na</b> 11	+1 24.305 2-8-2 <b>Mg</b> 12																		
4	39.0983 19 2-8-8-1 <b>K</b> 19	+1 40.08 2-8-2 <b>Ca</b> 20	+2 44.9559 2-8-9-2 <b>Sc</b> 21	+2 50.9415 2-8-11-2 <b>V</b> 23	+2 51.996 2-8-13-1 <b>Cr</b> 24	+2 54.9380 2-8-13-2 <b>Mn</b> 25	+2 55.845 2-8-14-2 <b>Fe</b> 26	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27	+2 58.9332 2-8-15-2 <b>Co</b> 27
5	85.4678 37 2-8-18-8-1 <b>Rb</b> 37	+1 87.62 2-8-18-8-2 <b>Sr</b> 38	+2 88.9059 2-8-18-9-2 <b>Y</b> 39	+2 91.224 2-8-18-10-2 <b>Zr</b> 40	+2 92.9064 2-8-18-10-2 <b>Nb</b> 41	+2 95.94 2-8-18-10-2 <b>Mo</b> 42	+2 101.07 2-8-18-10-2 <b>Ru</b> 44	+2 102.906 2-8-18-10-2 <b>Rh</b> 45	+2 106.42 2-8-18-10-2 <b>Pd</b> 46	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47	+2 107.868 2-8-18-10-2 <b>Ag</b> 47
6	132.905 55 2-8-18-18-8-1 <b>Cs</b> 55	+1 137.33 2-8-18-8-2 <b>Ba</b> 56	+2 138.9055 2-8-18-18-9-2 <b>La</b> 57	+2 178.49 2-8-32-10-2 <b>Hf</b> 72	+2 180.948 2-8-32-11-2 <b>Ta</b> 73	+2 183.84 2-8-32-12-2 <b>W</b> 74	+2 186.207 2-8-32-13-2 <b>Re</b> 75	+2 190.23 2-8-32-14-2 <b>Os</b> 76	+2 195.08 2-8-32-17-1 <b>Pt</b> 78	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79	+2 196.967 2-8-32-18-1 <b>Au</b> 79
7	(223) 87 2-8-32-18-8-1 <b>Fr</b> 87	+1 (226) 88 2-8-32-18-8-2 <b>Ra</b> 88	+2 (227) 89 2-8-32-18-9-2 <b>Ac</b> 89	+2 (261) 104 2-8-32-10-2 <b>Rf</b> 104	+2 (262) 105 2-8-32-11-2 <b>Db</b> 105	+2 (266) 106 2-8-32-12-2 <b>Sg</b> 106	+2 (272) 107 2-8-32-13-2 <b>Bh</b> 107	+2 (277) 108 2-8-32-14-2 <b>Hs</b> 108	+2 (281) 110 2-8-32-17-1 <b>Ds</b> 110	+2 (280) 111 2-8-32-18-1 <b>Rg</b> 111	+2 (285) 112 2-8-32-18-2 <b>Cn</b> 112	+2 (285) 112 2-8-32-18-2 <b>Cn</b> 112	+2 (284) 113 2-8-32-18-3 <b>Uut</b> 113	+2 (289) 114 2-8-32-18-4 <b>Uuq</b> 114	+2 (288) 115 2-8-32-18-5 <b>Uup</b> 115	+2 (292) 116 2-8-32-18-6 <b>Uuh</b> 116	+2 (?) 117 2-8-32-18-7 <b>Uus</b> 117	+2 (294) 118 2-8-32-18-8 <b>Uuo</b> 118	+2 (294) 118 2-8-32-18-8 <b>Uuo</b> 118	

140.116 58 2-8-32-18-9-2 <b>Ce</b> 58	+3 140.908 2-8-32-18-9-2 <b>Pr</b> 59	+3 144.24 2-8-32-18-9-2 <b>Nd</b> 60	+3 150.36 2-8-32-18-9-2 <b>Pm</b> 61	+3 151.964 2-8-32-18-9-2 <b>Eu</b> 63	+3 157.25 2-8-32-18-9-2 <b>Gd</b> 64	+3 158.925 2-8-32-18-9-2 <b>Tb</b> 65	+3 162.500 2-8-32-18-9-2 <b>Dy</b> 66	+3 164.930 2-8-32-18-9-2 <b>Ho</b> 67	+3 167.259 2-8-32-18-9-2 <b>Er</b> 68	+3 168.934 2-8-32-18-9-2 <b>Tm</b> 69	+3 173.04 2-8-32-18-9-2 <b>Yb</b> 70	+3 174.9668 2-8-32-18-9-2 <b>Lu</b> 71
232.038 90 2-8-32-18-9-2 <b>Th</b> 90	+4 231.036 2-8-32-18-9-2 <b>Pa</b> 91	+3 238.029 2-8-32-18-9-2 <b>U</b> 92	+3 237 2-8-32-18-9-2 <b>Np</b> 93	+3 243 2-8-32-18-9-2 <b>Am</b> 95	+3 247 2-8-32-18-9-2 <b>Cm</b> 96	+3 247 2-8-32-18-9-2 <b>Bk</b> 97	+3 251 2-8-32-18-9-2 <b>Cf</b> 98	+3 252 2-8-32-18-9-2 <b>Es</b> 99	+3 257 2-8-32-18-9-2 <b>Fm</b> 100	+3 258 2-8-32-18-9-2 <b>Md</b> 101	+3 259 2-8-32-18-9-2 <b>No</b> 102	+3 262 2-8-32-18-9-2 <b>Lr</b> 103

\* ...  
\*\* ...  
S : C H N C m p j , 91 , 2010 2011, CRC P

**Table S**  
**Properties of Selected Elements**

Atomic Number	Symbol	Name	First Ionization Energy	Electro-negativity	Melting Point	Boiling Point	Density**	Atomic Radius
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								

Atomic Number	Symbol	Name	First Ionization Energy	Electro-negativity	Melting Point	Boiling* Point	Density**	Atomic Radius
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
Elements 58-71 have been omitted.								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
Elements 90 and above have been omitted.								

\*  $\Delta H_{vap}$  (kJ/mol)  $\Delta H_{fusion}$  (kJ/mol)  $\Delta H_{atom}$  (kJ/mol)  $\Delta H_{ion}$  (kJ/mol)  $\Delta H_{sub}$  (kJ/mol)  $\Delta H_{comb}$  (kJ/mol)  $\Delta H_{f}$  (kJ/mol)  $\Delta H_{c}$  (kJ/mol)  $\Delta H_{m}$  (kJ/mol)  $\Delta H_{s}$  (kJ/mol)  $\Delta H_{l}$  (kJ/mol)  $\Delta H_{g}$  (kJ/mol)  $\Delta H_{aq}$  (kJ/mol)  $\Delta H_{ox}$  (kJ/mol)  $\Delta H_{red}$  (kJ/mol)  $\Delta H_{hyd}$  (kJ/mol)  $\Delta H_{net}$  (kJ/mol)  $\Delta H_{rxn}$  (kJ/mol)  $\Delta H_{f}^{\circ}$  (kJ/mol)  $\Delta H_{c}^{\circ}$  (kJ/mol)  $\Delta H_{m}^{\circ}$  (kJ/mol)  $\Delta H_{s}^{\circ}$  (kJ/mol)  $\Delta H_{l}^{\circ}$  (kJ/mol)  $\Delta H_{g}^{\circ}$  (kJ/mol)  $\Delta H_{aq}^{\circ}$  (kJ/mol)  $\Delta H_{ox}^{\circ}$  (kJ/mol)  $\Delta H_{red}^{\circ}$  (kJ/mol)  $\Delta H_{hyd}^{\circ}$  (kJ/mol)  $\Delta H_{net}^{\circ}$  (kJ/mol)  $\Delta H_{rxn}^{\circ}$  (kJ/mol)

\*\*  $\rho$  (g/cm<sup>3</sup>)  $\rho_{4}$  (g/cm<sup>3</sup>)  $\rho_{20}$  (g/cm<sup>3</sup>)  $\rho_{25}$  (g/cm<sup>3</sup>)  $\rho_{30}$  (g/cm<sup>3</sup>)  $\rho_{35}$  (g/cm<sup>3</sup>)  $\rho_{40}$  (g/cm<sup>3</sup>)  $\rho_{45}$  (g/cm<sup>3</sup>)  $\rho_{50}$  (g/cm<sup>3</sup>)  $\rho_{55}$  (g/cm<sup>3</sup>)  $\rho_{60}$  (g/cm<sup>3</sup>)  $\rho_{65}$  (g/cm<sup>3</sup>)  $\rho_{70}$  (g/cm<sup>3</sup>)  $\rho_{75}$  (g/cm<sup>3</sup>)  $\rho_{80}$  (g/cm<sup>3</sup>)  $\rho_{85}$  (g/cm<sup>3</sup>)  $\rho_{90}$  (g/cm<sup>3</sup>)  $\rho_{95}$  (g/cm<sup>3</sup>)  $\rho_{100}$  (g/cm<sup>3</sup>)  $\rho_{105}$  (g/cm<sup>3</sup>)  $\rho_{110}$  (g/cm<sup>3</sup>)  $\rho_{115}$  (g/cm<sup>3</sup>)  $\rho_{120}$  (g/cm<sup>3</sup>)  $\rho_{125}$  (g/cm<sup>3</sup>)  $\rho_{130}$  (g/cm<sup>3</sup>)  $\rho_{135}$  (g/cm<sup>3</sup>)  $\rho_{140}$  (g/cm<sup>3</sup>)  $\rho_{145}$  (g/cm<sup>3</sup>)  $\rho_{150}$  (g/cm<sup>3</sup>)  $\rho_{155}$  (g/cm<sup>3</sup>)  $\rho_{160}$  (g/cm<sup>3</sup>)  $\rho_{165}$  (g/cm<sup>3</sup>)  $\rho_{170}$  (g/cm<sup>3</sup>)  $\rho_{175}$  (g/cm<sup>3</sup>)  $\rho_{180}$  (g/cm<sup>3</sup>)  $\rho_{185}$  (g/cm<sup>3</sup>)  $\rho_{190}$  (g/cm<sup>3</sup>)  $\rho_{195}$  (g/cm<sup>3</sup>)  $\rho_{200}$  (g/cm<sup>3</sup>)  $\rho_{205}$  (g/cm<sup>3</sup>)  $\rho_{210}$  (g/cm<sup>3</sup>)  $\rho_{215}$  (g/cm<sup>3</sup>)  $\rho_{220}$  (g/cm<sup>3</sup>)  $\rho_{225}$  (g/cm<sup>3</sup>)  $\rho_{230}$  (g/cm<sup>3</sup>)  $\rho_{235}$  (g/cm<sup>3</sup>)  $\rho_{240}$  (g/cm<sup>3</sup>)  $\rho_{245}$  (g/cm<sup>3</sup>)  $\rho_{250}$  (g/cm<sup>3</sup>)  $\rho_{255}$  (g/cm<sup>3</sup>)  $\rho_{260}$  (g/cm<sup>3</sup>)  $\rho_{265}$  (g/cm<sup>3</sup>)  $\rho_{270}$  (g/cm<sup>3</sup>)  $\rho_{275}$  (g/cm<sup>3</sup>)  $\rho_{280}$  (g/cm<sup>3</sup>)  $\rho_{285}$  (g/cm<sup>3</sup>)  $\rho_{290}$  (g/cm<sup>3</sup>)  $\rho_{295}$  (g/cm<sup>3</sup>)  $\rho_{300}$  (g/cm<sup>3</sup>)  $\rho_{305}$  (g/cm<sup>3</sup>)  $\rho_{310}$  (g/cm<sup>3</sup>)  $\rho_{315}$  (g/cm<sup>3</sup>)  $\rho_{320}$  (g/cm<sup>3</sup>)  $\rho_{325}$  (g/cm<sup>3</sup>)  $\rho_{330}$  (g/cm<sup>3</sup>)  $\rho_{335}$  (g/cm<sup>3</sup>)  $\rho_{340}$  (g/cm<sup>3</sup>)  $\rho_{345}$  (g/cm<sup>3</sup>)  $\rho_{350}$  (g/cm<sup>3</sup>)  $\rho_{355}$  (g/cm<sup>3</sup>)  $\rho_{360}$  (g/cm<sup>3</sup>)  $\rho_{365}$  (g/cm<sup>3</sup>)  $\rho_{370}$  (g/cm<sup>3</sup>)  $\rho_{375}$  (g/cm<sup>3</sup>)  $\rho_{380}$  (g/cm<sup>3</sup>)  $\rho_{385}$  (g/cm<sup>3</sup>)  $\rho_{390}$  (g/cm<sup>3</sup>)  $\rho_{395}$  (g/cm<sup>3</sup>)  $\rho_{400}$  (g/cm<sup>3</sup>)  $\rho_{405}$  (g/cm<sup>3</sup>)  $\rho_{410}$  (g/cm<sup>3</sup>)  $\rho_{415}$  (g/cm<sup>3</sup>)  $\rho_{420}$  (g/cm<sup>3</sup>)  $\rho_{425}$  (g/cm<sup>3</sup>)  $\rho_{430}$  (g/cm<sup>3</sup>)  $\rho_{435}$  (g/cm<sup>3</sup>)  $\rho_{440}$  (g/cm<sup>3</sup>)  $\rho_{445}$  (g/cm<sup>3</sup>)  $\rho_{450}$  (g/cm<sup>3</sup>)  $\rho_{455}$  (g/cm<sup>3</sup>)  $\rho_{460}$  (g/cm<sup>3</sup>)  $\rho_{465}$  (g/cm<sup>3</sup>)  $\rho_{470}$  (g/cm<sup>3</sup>)  $\rho_{475}$  (g/cm<sup>3</sup>)  $\rho_{480}$  (g/cm<sup>3</sup>)  $\rho_{485}$  (g/cm<sup>3</sup>)  $\rho_{490}$  (g/cm<sup>3</sup>)  $\rho_{495}$  (g/cm<sup>3</sup>)  $\rho_{500}$  (g/cm<sup>3</sup>)  $\rho_{505}$  (g/cm<sup>3</sup>)  $\rho_{510}$  (g/cm<sup>3</sup>)  $\rho_{515}$  (g/cm<sup>3</sup>)  $\rho_{520}$  (g/cm<sup>3</sup>)  $\rho_{525}$  (g/cm<sup>3</sup>)  $\rho_{530}$  (g/cm<sup>3</sup>)  $\rho_{535}$  (g/cm<sup>3</sup>)  $\rho_{540}$  (g/cm<sup>3</sup>)  $\rho_{545}$  (g/cm<sup>3</sup>)  $\rho_{550}$  (g/cm<sup>3</sup>)  $\rho_{555}$  (g/cm<sup>3</sup>)  $\rho_{560}$  (g/cm<sup>3</sup>)  $\rho_{565}$  (g/cm<sup>3</sup>)  $\rho_{570}$  (g/cm<sup>3</sup>)  $\rho_{575}$  (g/cm<sup>3</sup>)  $\rho_{580}$  (g/cm<sup>3</sup>)  $\rho_{585}$  (g/cm<sup>3</sup>)  $\rho_{590}$  (g/cm<sup>3</sup>)  $\rho_{595}$  (g/cm<sup>3</sup>)  $\rho_{600}$  (g/cm<sup>3</sup>)  $\rho_{605}$  (g/cm<sup>3</sup>)  $\rho_{610}$  (g/cm<sup>3</sup>)  $\rho_{615}$  (g/cm<sup>3</sup>)  $\rho_{620}$  (g/cm<sup>3</sup>)  $\rho_{625}$  (g/cm<sup>3</sup>)  $\rho_{630}$  (g/cm<sup>3</sup>)  $\rho_{635}$  (g/cm<sup>3</sup>)  $\rho_{640}$  (g/cm<sup>3</sup>)  $\rho_{645}$  (g/cm<sup>3</sup>)  $\rho_{650}$  (g/cm<sup>3</sup>)  $\rho_{655}$  (g/cm<sup>3</sup>)  $\rho_{660}$  (g/cm<sup>3</sup>)  $\rho_{665}$  (g/cm<sup>3</sup>)  $\rho_{670}$  (g/cm<sup>3</sup>)  $\rho_{675}$  (g/cm<sup>3</sup>)  $\rho_{680}$  (g/cm<sup>3</sup>)  $\rho_{685}$  (g/cm<sup>3</sup>)  $\rho_{690}$  (g/cm<sup>3</sup>)  $\rho_{695}$  (g/cm<sup>3</sup>)  $\rho_{700}$  (g/cm<sup>3</sup>)  $\rho_{705}$  (g/cm<sup>3</sup>)  $\rho_{710}$  (g/cm<sup>3</sup>)  $\rho_{715}$  (g/cm<sup>3</sup>)  $\rho_{720}$  (g/cm<sup>3</sup>)  $\rho_{725}$  (g/cm<sup>3</sup>)  $\rho_{730}$  (g/cm<sup>3</sup>)  $\rho_{735}$  (g/cm<sup>3</sup>)  $\rho_{740}$  (g/cm<sup>3</sup>)  $\rho_{745}$  (g/cm<sup>3</sup>)  $\rho_{750}$  (g/cm<sup>3</sup>)  $\rho_{755}$  (g/cm<sup>3</sup>)  $\rho_{760}$  (g/cm<sup>3</sup>)  $\rho_{765}$  (g/cm<sup>3</sup>)  $\rho_{770}$  (g/cm<sup>3</sup>)  $\rho_{775}$  (g/cm<sup>3</sup>)  $\rho_{780}$  (g/cm<sup>3</sup>)  $\rho_{785}$  (g/cm<sup>3</sup>)  $\rho_{790}$  (g/cm<sup>3</sup>)  $\rho_{795}$  (g/cm<sup>3</sup>)  $\rho_{800}$  (g/cm<sup>3</sup>)  $\rho_{805}$  (g/cm<sup>3</sup>)  $\rho_{810}$  (g/cm<sup>3</sup>)  $\rho_{815}$  (g/cm<sup>3</sup>)  $\rho_{820}$  (g/cm<sup>3</sup>)  $\rho_{825}$  (g/cm<sup>3</sup>)  $\rho_{830}$  (g/cm<sup>3</sup>)  $\rho_{835}$  (g/cm<sup>3</sup>)  $\rho_{840}$  (g/cm<sup>3</sup>)  $\rho_{845}$  (g/cm<sup>3</sup>)  $\rho_{850}$  (g/cm<sup>3</sup>)  $\rho_{855}$  (g/cm<sup>3</sup>)  $\rho_{860}$  (g/cm<sup>3</sup>)  $\rho_{865}$  (g/cm<sup>3</sup>)  $\rho_{870}$  (g/cm<sup>3</sup>)  $\rho_{875}$  (g/cm<sup>3</sup>)  $\rho_{880}$  (g/cm<sup>3</sup>)  $\rho_{885}$  (g/cm<sup>3</sup>)  $\rho_{890}$  (g/cm<sup>3</sup>)  $\rho_{895}$  (g/cm<sup>3</sup>)  $\rho_{900}$  (g/cm<sup>3</sup>)  $\rho_{905}$  (g/cm<sup>3</sup>)  $\rho_{910}$  (g/cm<sup>3</sup>)  $\rho_{915}$  (g/cm<sup>3</sup>)  $\rho_{920}$  (g/cm<sup>3</sup>)  $\rho_{925}$  (g/cm<sup>3</sup>)  $\rho_{930}$  (g/cm<sup>3</sup>)  $\rho_{935}$  (g/cm<sup>3</sup>)  $\rho_{940}$  (g/cm<sup>3</sup>)  $\rho_{945}$  (g/cm<sup>3</sup>)  $\rho_{950}$  (g/cm<sup>3</sup>)  $\rho_{955}$  (g/cm<sup>3</sup>)  $\rho_{960}$  (g/cm<sup>3</sup>)  $\rho_{965}$  (g/cm<sup>3</sup>)  $\rho_{970}$  (g/cm<sup>3</sup>)  $\rho_{975}$  (g/cm<sup>3</sup>)  $\rho_{980}$  (g/cm<sup>3</sup>)  $\rho_{985}$  (g/cm<sup>3</sup>)  $\rho_{990}$  (g/cm<sup>3</sup>)  $\rho_{995}$  (g/cm<sup>3</sup>)  $\rho_{1000}$  (g/cm<sup>3</sup>)

SOURCE: CRC Handbook of Chemistry and Physics, 91st Edition, 2010-2011, CRC Press

**Table T**  
**Important Formulas and Equations**

<b>Density</b>	$\rho = \frac{m}{V}$
<b>Mole Calculations</b>	$n = \frac{m}{M}$
<b>Percent Error</b>	$\% \text{ Error} = \frac{ \text{Experimental} - \text{Theoretical} }{\text{Theoretical}} \times 100$
<b>Percent Composition</b>	$\% \text{ Composition} = \frac{\text{mass of element}}{\text{total mass}} \times 100$
<b>Concentration</b>	$M = \frac{n}{V}$
	$m = \rho V$
<b>Combined Gas Law</b>	$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$
<b>Titration</b>	$M_A V_A = M_B V_B$
<b>Heat</b>	$Q = C \Delta T$ $H = C m \Delta T$ $H = H_f + H_v + H_c$ $C = \frac{Q}{m \Delta T}$ $\Delta T = \frac{Q}{C m}$
<b>Temperature</b>	$T_C = \frac{5}{9}(T_F - 32)$