

1_A 2_A 3_B 4_B 5_B 6_B 7_B 8 1_B 2_B 3_A 4_A 5_A 6_A 7_A 8_A

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1 H		TERMS AND DEFINITIONS ICP WORKING LIMITS The ICP Lower Working Limit shown is approximately 10x the Detection Limit. Multiplying the Lower Working Limit by 106 gives approximately the Upper Working Limit AA WORKING RANGES The lower limit of each AA Working Range is approximately 10x the Detection Limit. The upper limit of each AA Working Range gives approximately 0.8 absorbance.										189.926 90 ICP Primary Wavelength, nm ICP Lower Working Limit, µg/L (ppb)												He											
2 670.784 7 670.8 0.02-4 5-26 Li		313.042 1 234.9 0.01-3 1-7 Be												249.773 10 249.8 5-1400 750-10,000 B		193.026 200 C		174.272 500,000 N		O		F		Ne											
3 588.995 30 589.0 0.002-0.8 0.25-2 Na		279.553 0.8 285.2 0.003-0.6 0.2-2 Mg												167.079 20 396.2 0.3-100 0.5-50 Al		251.611 50 251.6 1-300 5-260 Si		177.495 100 213.6 400-100,000 1500-20,000 P		180.731 42 S		725.665 2,000,000 Cl		Ar											
4 766.490 200 766.5 0.03-1.6 0.5-5 K		393.366 0.7 422.7 0.005-4 0.5-6 Ca		361.384 3 391.2 0.4-60 Sc		334.941 4 364.3 0.7-200 10-460 Ti		309.311 7 318.4 0.5-100 10-200 V		267.716 20 357.9 0.03-10 0.5-16 Cr		257.610 2 279.5 0.015-4 0.5-7 Mn		238.204 7 248.3 0.05-8 1-16 Fe		238.892 10 240.7 0.04-10 1-40 Co		231.604 30 232.0 0.09-8 5-50 Ni		324.754 9 324.7 0.01-4 1-26 Cu		213.856 6 213.9 0.005-1.6 0.05-2 Zn		417.206 100 294.4 0.6-200 25-200 Ga		265.118 200 265.2 2-300 Ge		188.979 70 193.7 2-100 10-60 As		196.026 100 196.0 5-80 25-200 Se		163.340 70,000 Br		Kr	
5 420.185 10 780.0 0.07-10 2.5-12 Rb		407.771 0.25 460.7 0.02-8 5-30 Sr		371.030 6 410.2 2-400 Y		339.198 20 360.1 10-1800 Zr		309.418 50 334.9 20-4000 Nb		202.030 30 313.3 0.2-20 1-80 Mo		267.876 100 349.9 0.6-100 50-260 Tc		343.489 70 343.5 0.04-20 Ru		340.458 40 244.8 0.1-12 15-120 Rh		328.068 8 328.1 0.02-4 0.25-8 Pd		214.438 5 228.8 0.004-1.8 0.15-2.6 Ag		325.609 200 303.9 0.4-80 50-260 Cd		189.926 90 235.5 0.3-140 10-220 In		217.581 90 217.6 0.4-40 7.5-90 Sn		214.281 40 214.3 0.2-40 5-180 Sb		178.276 700 Te		I		Xe	
6 455.531 40,000 852.1 0.04-20 10-60 Cs		455.403 0.6 553.6 0.1-40 2-120 Ba		379.478 1 550.1 20-8000 La		264.141 40 307.3 20-2000 Hf		268.517 100 271.5 20-2000 Ta		239.709 80 255.1 10-1000 W		221.426 30 346.1 6-2000 Re		225.585 2.5 290.9 1-200 Os		224.268 70 208.9 4-600 Ir		214.423 100 266.0 1-200 10-900 Pt		242.795 20 242.8 0.1-16 5-40 Au		184.950 70 253.7 1.5-300 100-3600 Hg		351.924 100 276.8 0.2-60 5-200 Tl		220.353 100 217.0 0.1-12 2.5-26 Pb		223.061 70 223.1 0.4-70 5-70 Bi		Po		At		Rn	
7 Fr		Ra		Ac		Rf		Ha																											

189.926
90
ICP Primary Wavelength, nm
ICP Lower Working Limit, µg/L (ppb)

235.5
0.3-140
10-220
AA Wavelength, nm
Flame AA Working Range, mg/L (ppm)
Graphite Furnace AA Working Range, µg/L (ppb)

Sn
Nitrous Oxide/Acetylene Flame
Air/Acetylene Flame



418.660 80 520.0 300-6000 Ce		417.939 10 495.1 60-4000 Pr		401.225 40 492.5 10-1000 Nd		Pm		359.262 100 429.7 10-1200 Sm		381.967 9 459.4 0.2-80 25-160 Eu		342.247 50 368.4 20-3000 Gd		350.917 60 432.7 5-1600 5-36 Tb		353.170 20 421.2 0.3-100 50-360 Dy		345.600 20 410.4 0.4-160 Ho		337.276 7 400.8 0.3-140 100-760 Er		346.220 20 371.8 9-60 Tm		328.937 3 398.8 0.04-16 Yb		261.542 3 336.0 3-1400 Lu	
274.716 70 Th		Pa		385.958 300 358.5 400-20,000 U		Np		Pu		Am		Cm		Bk		Cf		Es		Fm		Md		No		Lr	



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