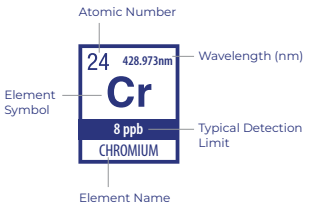
MICAP - OES 1000

Typical Limit of Detection and Resolution

Key



Typical Resolution

Wavelength (nm)	Resolution (pm)
Zn 202.584	5
Cr 360.534	11
Ba 455.403	14
Na 588.996	21
Li 610.364	30

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1 H HYDROGEN																	2 He HELIUM
2	3 610.364nm Li 19 ppb LITHIUM	4 234.860nm Be 2 ppb BERYLLIUM											5 249.772nm B 9 ppb BORON	6 C CARBON	7 N NITROGEN	8 O OXYGEN	9 F FLUORINE	10 Ne NEON
3	11 588.995nm Na 2 ppb SODIUM	12 279.553nm Mg 1 ppb MAGNESIUM											13 396.152nm Al 6 ppb ALUMINUM	14 251.611nm Si 14 ppb SILICON	15 213.618nm P 560 ppb PHOSPHORUS	16 S SULFUR	17 Cl CHLORINE	18 Ar ARGON
4	19 766.490nm K 24 ppb POTASSIUM	20 393.366nm Ca 1 ppb CALCIUM	21 361.383nm Sc 1 ppb SCANDIUM	22 334.940nm Ti 7 ppb TITANIUM	23 311.071nm V 9 ppb VANADIUM	24 428.973nm Cr 8 ppb CHROMIUM	25 259.372nm Mn 2 ppb MANGANESE	26 259.940nm Fe 12 ppb IRON	27 345.350nm Co 21 ppb COBALT	28 346.165nm Ni 27 ppb NICKEL	29 324.754nm Cu 2 ppb COPPER	30 213.857nm Zn 26 ppb ZINC	31 403.298nm Ga 11 ppb GALLIUM	32 265.117nm Ge 32 ppb GERMANIUM	33 228.812nm As 310 ppb ARSENIC	34 196.026nm Se 790 ppb SELENIUM	35 Br BROMINE	36 Kr KRYPTON
5	37 Rb RUBIDIUM	38 407.771nm Sr 1 ppb STRONTIUM	39 437.493nm Y 1 ppb YTTRIUM	40 339.198nm Zr 7 ppb ZIRCONIUM	41 313.079nm Nb 24 ppb NIOBIUM	42 379.825nm Mo 22 ppb MOLYBDENUM	43 Tc TECHNETIUM	44 372.803nm Ru 12 ppb RUTHENIUM	45 369.236nm Rh 10 ppb RHODIUM	46 360.955nm Pd 8 ppb PALLADIUM	47 328.068nm Ag 10 ppb SILVER	48 228.802nm Cd 13 ppb CADMIUM	49 451.130nm In 10 ppb INDIUM	50 303.412nm Sn 110 ppb TIN	51 252.852nm Sb 74 ppb ANTIMONY	52 238.579nm Te 230 ppb TELLURIUM	53 206.163nm I 14,000 ppb IODINE	54 Xe XENON
6	55 Cs CESIUM	56 455.403nm Ba 1 ppb BARIUM	•	72 339.980nm Hf 67 ppb HAFNIUM	73 263.558nm Ta 51 ppb TANTALUM	74 400.871nm W 43 ppb TUNGSTEN	75 346.046nm Re 40 ppb RHENIUM	76 442.047nm Os 39 ppb OSMIUM	77 322.078nm Ir 84 ppb IRIDIUM	78 265.945nm Pt 34 ppb PLATINUM	79 242.795nm Au 16 ppb GOLD	80 253.652nm Hg 37 ppb MERCURY	81 377.572nm Tl 94 ppb THALLIUM	82 283.305nm Pb 65 ppb LEAD	83 306.770nm Bi 83 ppb BISMUTH	84 Po POLONIUM	85 At ASTATINE	86 Rn RADON
7	87 Fr FRANCIUM	88 Ra RADIUM	• •	104 Rf RUTHERFORDIUM	105 Db DUBNIUM	106 Sg SEABORGIUM	107 Bh BOHRIUM	108 Hs HASSIUM	109 Mt MEITNERIUM	110 Ds DARMSTADTIUM	111 Rg ROENTGENIUM	112 Cn COPERNICIUM	113 Nh NIHONIUM	114 Fl FLEROVIUM	115 Mc MOSCOVIUM	116 Lv LIVERMORIUM	117 Ts TENNESSINE	118 Og OGANESSON
Lanthanide series			•	57 408.672nm La 3 ppb LANTHANUM	58 446.021nm Ce 10 ppb CERIUM	59 440.882nm Pr 6 ppb PRASEODYMIUM	60 401.225nm Nd 7 ppb NEODYMIUM	61 Pm PROMETHIUM	62 428.079nm Sm 3 ppb SAMARIUM	63 420.505nm Eu 3 ppb EUROPIUM	64 342.247nm Gd 12 ppb GADOLINIUM	65 384.873nm Tb 19 ppb TERBIUM	66 394.468nm Dy 4 ppb DYSPROSIUM	67 345.600nm Ho 4 ppb HOLMIUM	68 369.265nm Er 3 ppb ERBIUM	69 384.802nm Tm 2 ppb THULIUM	70 328.937nm Yb 1 ppb YTTERBIUM	71 261.542nm Lu 1 ppb LUTETIUM
Actinide series			• •	89 Ac ACTINIUM	90 401.913nm Th 10 ppb THORIUM	91 Pa PROTACTINIUM	92 409.013nm U 50 ppb URANIUM	93 Np NEPTUNIUM	94 Pu PLUTONIUM	95 Am AMERICIUM	96 Cm CURIUM	97 Bk BERKELIUM	98 Cf CALIFORNIUM	99 Es EINSTEINIUM	100 Fm FERMIUM	101 Md MENDELEVIUM	102 No NOBELIUM	103 Lr LAWRENCIUM

Detection limits are averaged from multiple systems.
Values are calculated from 3x the standard deviation of 10 measurements of a blank; each with three, 30 second replicates.

RADOM INSTRUMENTS