

ATOMIC NO.

IONIZATION POTENTIAL

ION BEAM ETCH RATE (Å/min)

SPUTTER YIELD

ATOMIC WEIGHT

Y-FACTOR

K
E
Y

Ion Beam Etch Rates and Sputter Yields

Ar, 500ev, 1mA/cm² Beam Current Density

Es 99 (254)	Cm 96 (247)	U 92 6.08 730 0.94 238.03 781	Ce 58 5.6 12.3 20 140.12	Br 35 11.84 21.6 35.9 79.909	Ho 67 164.930	Pb 82 7.415 15.028 31.93 2600 2.3 207.194 1135	Zr 40 6.84 13.13 22.98 570 0.63 91.223 872	Be 4 9.32 18.206 153.85 130 0.43 9.012 303	Ta 73 7.88 16.2 420 0.62 180.948 675	Os 76 6.74 14.65 29.31 310 0.60 50.942 518	Nb 41 6.88 14.32 25.04 470 0.7 92.906 674	Y 39 6.38 12.23 20.5 950 0.77 88.905 1237	V 23 6.74 14.65 29.31 310 0.60 50.942 518	
Cf 98 (249)	Am 95 (243)	Eu 63 5.67 11.24 151.96	Th 90 6.95 810 0.66 232.038 1231	Xe 54 12.127 21.2 31.3 131.30	Cl 17 13.01 23.8 39.9 35.453	O 8 13.614 35.108 54.886 15.999	Bi 83 7.287 16.68 25.56 8800 0.63 1333	Na 11 5.138 47.29 71.715 22.990	Ti 22 6.82 13.57 31.05 27.47 330 0.50 47.90 655	Rh 45 7.46 18.07 9.22 720 1.4 102.95 516	Ni 28 7.633 18.15 35.16 530 1.3 58.71 410	Pt 78 9.0 18.56 620 1.1 195.09 565	Au 79 9.22 20.5 1080 1.7 196.967 635	In 49 5.785 18.86 28.03 114.82
Dy 66 6.8 1100 0.96 162.50 1182	Pu 94 5.1 (242)	Th 90 6.95 810 0.66 232.038 1231	Xe 54 12.127 21.2 31.3 131.30	Cl 17 13.01 23.8 39.9 35.453	Bi 83 7.287 16.68 25.56 8800 0.63 1333	Sn 50 7.342 14.628 30.49 1200 1.2 118.69 1010	Rb 37 4.176 27.5 40 4000 85.47 3090- 4020	Ba 56 5.21 10.001 35.5 137.34	Fe 26 7.87 16.18 30.643 350 0.80 55.847 441	Re 75 7.87 16.6 520 0.95 186.1 551	Zn 30 9.391 17.96 65.373	Hg 80 10.43 18.751 34.2 200.59	Tl 81 6.106 20.42 29.8 204.37	
Bk 97 (247)	Sm 62 5.67 11.24 151.96	Pm 61 (147)	Kr 36 13.996 24.56 36.9 83.80	F 9 17.418 34.98 62.646 18.998	Sb 51 8.639 16.5 25.3 3238 121.75 1131	Mg 12 7.644 15.031 80.14 225 24.312	Ra 88 6.9 12.1 20 (226)	Hf 72 7 14.9 23.2 660 0.79 178.49 833	W 74 7.98 17.7 340 0.60 183.85 592	Ru 44 7.364 16.76 28.46 610 1.2 101.07 506	Pd 46 8.33 19.42 32.92 1100 2.0 106.4 550	B 5 8.296 25.149 37.92 10.811 290	C 6 11.256 24.376 47.871 110 0.36 12.011 393	
Tb 65 5.98 158.924	Np 93 (237)	Nd 60 5.51 144.24	Ar 18 15.755 27.62 40.9 39.948	Po 84 8.43 (210)	As 33 9.81 18.63 28.34 74.922	Li 3 5.39 75.619 122.419 6.939	Fr 87 4 (223)	K 19 4.339 31.81 46 39.102	Mo 42 7.10 16.15 27.13 410 0.70 95.944 584	Mn 25 7.432 15.636 33.69 870 1.9 54.938 459	Tc 43 7.28 15.26 29.54 (98)	Ag 47 7.574 21.48 34.82 1800 2.8 107.870 639	Cd 48 8.991 16.904 37.47 112.40	Si 14 8.149 16.34 33.488 370 0.5 28.086 750
Gd 64 6.16 12 1100 0.90 157.25 1238	Pa 91 (231)	Pr 59 5.46 140.907	Ne 10 21.559 41.07 63.5 20.183	Te 52 9.01 18.6 31 127.60 1271	Se 34 9.75 21.5 32 78.966	Cr 24 6.764 16.49 30.95 530 1.2 51.996 450	Ca 20 6.111 11.868 51.21 40.08	Sc 21 6.54 12.8 24.75 44.956	At 85 9.5 (210)	Sr 38 5.692 11.027 87.62	He 2 24.481 54.403 4.003	Co 27 7.86 17.05 33.49 450 1.1 58.933 412	Ge 32 7.88 15.93 34.21 920 1.1 72.59 848	
Yb 70 6.2 12.10 173.04	No 102 (259)	Rn 86 10.746 (222)	Lu 71 0.0 14.7 174.97	P 15 10.484 19.72 30.156 30.974	Cs 55 3.893 25.1 35 132.90	N 7 14.53 29.593 47.426 14.007	Ac 89 6.9 12.1 20 (227)	H 1 13.595 1.008	La 57 5.61 11.43 19.17 138.91	Ir 77 9 590 1.1 192.2 533	Al 13 5.984 18.823 28.44 640 1.0 26.982 621	Cu 29 7.724 20.29 36.83 880 2.0 63.544 441	Ga 31 6 20.57 30.7 69.72	
Fm 100 (257)	Er 68 6.08 1000 0.85 167.26	S 16 10.357 23.4 35 32.064												

