



Table of Isotopic Masses and Natural Abundance

| Z | A | E | Spin I | Natural Abundance (%) (Half-life) |
|----|----|----|--------|--------------------------------------|
| 0 | 1 | n | 1/2 | |
| 1 | 1 | H | 1/2 | 99.9885 |
| | 2 | H | 1 | 0.0115 |
| | 3 | H | 1/2 | (12.32 y) |
| 2 | 3 | He | 1/2 | 0.000134 |
| 3 | 6 | Li | 1 | 7.59 |
| | 7 | Li | 3/2 | 92.41 |
| 4 | 9 | Be | 3/2 | 100.0 |
| 5 | 10 | B | 3 | 1.601318 |
| | 11 | B | 3/2 | 4.782045 |
| 6 | 13 | C | 1/2 | 1.07 |
| 7 | 14 | N | 1 | 99.636 |
| | 15 | N | 1/2 | 0.364 |
| 8 | 17 | O | 5/2 | 0.038 |
| 9 | 19 | F | 1/2 | 100.0 |
| 10 | 21 | Ne | 3/2 | 0.27 |
| 11 | 22 | Na | 3 | (2.6019 y) |
| | 23 | Na | 3/2 | 100.0 |
| 12 | 25 | Mg | 5/2 | 10.00 |
| 13 | 27 | Al | 5/2 | 100.0 |
| 14 | 29 | Si | 1/2 | 4.685 |
| 15 | 31 | P | 1/2 | 100.0 |
| 16 | 33 | S | 3/2 | 0.75 |
| 17 | 35 | Cl | 3/2 | 75.76 |
| | 36 | Cl | 2 | (3.01 E5 y) |
| | 37 | Cl | 3/2 | 24.24 |
| 18 | 39 | Ar | 7/2 | (269 y) |
| 19 | 39 | K | 3/2 | 93.258 |
| | 40 | K | 4 | 0.0117 |
| | 41 | K | 3/2 | 6.730 |
| 20 | 41 | Ca | 7/2 | (1.02 E5 y) |
| | 43 | Ca | 7/2 | 0.135 |



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|----|----|----|--------|--------------------------------------|
| 21 | 45 | Sc | 7/2 | 100.0 |
| 22 | 47 | Ti | 5/2 | 7.44 |
| | 49 | Ti | 7/2 | 5.41 |
| 23 | 50 | V | 6 | 0.250 |
| | 51 | V | 7/2 | 99.750 |
| 24 | 53 | Cr | 3/2 | 9.501 |
| 25 | 53 | Mn | 7/2 | (3.74 E6 y) |
| | 55 | Mn | 5/2 | 100.0 |
| 26 | 57 | Fe | 1/2 | 2.119 |
| 27 | 59 | Co | 7/2 | 100.0 |
| | 60 | Co | 5 | (1925 d) |
| 28 | 61 | Ni | 3/2 | 1.1399 |
| 29 | 63 | Cu | 3/2 | 69.15 |
| | 65 | Cu | 3/2 | 30.85 |
| 30 | 67 | Zn | 5/2 | 4.102 |
| 31 | 69 | Ga | 3/2 | 60.108 |
| | 71 | Ga | 3/2 | 39.892 |
| 32 | 73 | Ge | 9/2 | 7.76 |
| 33 | 75 | As | 3/2 | 100.0 |
| 34 | 77 | Se | 1/2 | 7.63 |
| | 79 | Se | 7/2 | (2.95 E5 y) |
| 35 | 79 | Br | 3/2 | 50.69 |
| | 81 | Br | 3/2 | 49.31 |
| 36 | 83 | Kr | 9/2 | 11.500 |
| | 85 | Kr | 9/2 | (10.756 y) |
| 37 | 85 | Rb | 5/2 | 72.17 |
| | 87 | Rb | 3/2 | 27.83 |
| 38 | 87 | Sr | 9/2 | 7.00 |
| 39 | 89 | Y | 1/2 | 100.0 |
| 40 | 91 | Zr | 5/2 | 11.22 |



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|----|-----|----|--------|--------------------------------------|
| 41 | 93 | Nb | 9/2 | 100.0 |
| 42 | 95 | Mo | 5/2 | 15.90 |
| | 97 | Mo | 5/2 | 9.56 |
| 43 | 99 | Tc | 9/2 | (2.111 E5 y) |
| 44 | 99 | Ru | 5/2 | 12.76 |
| | 101 | Ru | 5/2 | 17.06 |
| 45 | 103 | Rh | 1/2 | 100.0 |
| | 105 | Rh | 7/2 | (35.36 h) |
| 46 | 105 | Pd | 5/2 | 22.33 |
| 47 | 107 | Ag | 1/2 | 51.839 |
| | 109 | Ag | 1/2 | 48.161 |
| 48 | 111 | Cd | 1/2 | 12.80 |
| | 113 | Cd | 1/2 | 12.22 |
| 49 | 113 | In | 9/2 | 4.29 |
| | 115 | In | 9/2 | 95.71 |
| 50 | 115 | Sn | 1/2 | 0.34 |
| | 117 | Sn | 1/2 | 7.68 |
| | 119 | Sn | 1/2 | 8.59 |
| 51 | 121 | Sb | 5/2 | 57.21 |
| | 123 | Sb | 7/2 | 42.79 |
| | 125 | Sb | 7/2 | (2.75856 y) |
| 52 | 123 | Te | 1/2 | 0.89 |
| | 125 | Te | 1/2 | 7.07 |
| 53 | 127 | I | 5/2 | 100.0 |
| | 129 | I | 7/2 | (1.57 E7 y) |
| 54 | 129 | Xe | 1/2 | 26.4006 |
| | 131 | Xe | 3/2 | 21.2324 |
| 55 | 133 | Cs | 7/2 | 100.0 |
| | 134 | Cs | 4 | (2.0652 y) |
| | 135 | Cs | 7/2 | (2.3 E6 y) |
| | 137 | Cs | 7/2 | (30.07 y) |
| 56 | 133 | Ba | 1/2 | (10.51 y) |
| | 135 | Ba | 3/2 | 6.592 |
| | 137 | Ba | 3/2 | 11.232 |
| 57 | 137 | La | 7/2 | (6 E4 y) |
| | 138 | La | 5 | 0.090 |
| | 139 | La | 7/2 | 99.910 |
| 59 | 141 | Pr | 5/2 | 100.0 |
| 60 | 143 | Nd | 7/2 | 12.2 |
| | 145 | Nd | 7/2 | 8.3 |



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|----|-----|----|--------|--------------------------------------|
| 61 | 147 | Pm | 7/2 | (2.6234 y) |
| 63 | 151 | Eu | 5/2 | 47.81 |
| | 152 | Eu | 3 | (13.537 y) |
| | 153 | Eu | 5/2 | 52.19 |
| | 154 | Eu | 3 | (8.593 y) |
| | 155 | Eu | 5/2 | (4.753 y) |
| 64 | 155 | Gd | 3/2 | 14.80 |
| | 157 | Gd | 3/2 | 15.65 |
| 65 | 157 | Tb | 3/2 | (71 y) |
| | 158 | Tb | 3 | (180 y) |
| | 159 | Tb | 3/2 | 100.0 |
| 66 | 161 | Dy | 5/2 | 18.889 |
| | 163 | Dy | 5/2 | 24.896 |
| 67 | 165 | Ho | 7/2 | 100.0 |
| 68 | 167 | Er | 7/2 | 22.869 |
| 69 | 169 | Tm | 1/2 | 100.0 |
| | 171 | Tm | 1/2 | (1.92 y) |
| 70 | 171 | Yb | 1/2 | 14.28 |
| | 173 | Yb | 5/2 | 16.13 |
| 71 | 173 | Lu | 7/2 | (1.37 y) |
| | 174 | Lu | 1 | (3.31 y) |
| | 175 | Lu | 7/2 | 97.41 |
| | 176 | Lu | 7 | 2.59 |
| 72 | 177 | Hf | 7/2 | 18.60 |
| | 179 | Hf | 9/2 | 13.62 |
| 73 | 181 | Ta | 7/2 | 99.988 |
| 74 | 183 | W | 1/2 | 14.31 |
| 75 | 185 | Re | 5/2 | 37.40 |
| | 187 | Re | 5/2 | 62.60 |
| 76 | 187 | Os | 1/2 | 1.96 |
| | 189 | Os | 3/2 | 16.15 |
| 77 | 191 | Ir | 3/2 | 37.3 |
| | 193 | Ir | 3/2 | 62.7 |
| 78 | 195 | Pt | 1/2 | 33.832 |
| 79 | 197 | Au | 3/2 | 100.0 |
| 80 | 199 | Hg | 1/2 | 16.87 |
| | 201 | Hg | 3/2 | 13.18 |



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|----|-----|----|--------|--------------------------------------|
| 81 | 203 | Tl | 1/2 | 29.52 |
| | 204 | Tl | 2 | (3.78 y) |
| | 205 | Tl | 1/2 | 70.48 |
| 82 | 207 | Pb | 1/2 | 22.1 |
| 83 | 207 | Bi | 9/2 | (32.9 y) |
| | 209 | Bi | 9/2 | 100.0 |
| 84 | 209 | Po | 1/2 | (102 y) |
| 86 | 211 | Rn | 1/2 | (14.6 h) |
| 87 | 212 | Fr | 5 | (20 min) |
| 88 | 225 | Ra | 1/2 | (14.9 d) |
| 89 | 227 | Ac | 3/2 | (21.772 y) |
| 90 | 229 | Th | 5/2 | (7.34 E3 y) |
| 91 | 231 | Pa | 3/2 | 100.0 |
| | | | | (3.276 E4 y) |
| 92 | 233 | U | 5/2 | (1.592 E5 y) |
| | 235 | U | 7/2 | 0.7204 |
| | | | | (7.04 E8 y) |
| 93 | 237 | Np | 5/2 | (2.144 E6 y) |
| 94 | 239 | Pu | 1/2 | (2.411 E4 y) |
| | 241 | Pu | 5/2 | (14.35 y) |
| 95 | 241 | Am | 5/2 | (432.2 y) |
| | 243 | Am | 5/2 | (7.37 E3 y) |
| 96 | 243 | Cm | 5/2 | (29.1 y) |
| | 245 | Cm | 7/2 | (8.5 E3 y) |
| | 247 | Cm | 9/2 | (1.56 E7 y) |
| 97 | 249 | Bk | 3.5 | (320 d) |
| 99 | 253 | Es | 3.5 | (20.47 d) |