

# - Cache à essai -

Bon mélange en espérant que vous aurez la bonne réaction !

| Groupe 1  |  |  |                                       |  |                                       |  |                                      |  |                                       |  |                                       |  |                                       |  |                                      |  |  |  |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       | 18                                     |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|---------------------------------------|--|---------------------------------------|--|--------------------------------------|--|---------------------------------------|--|---------------------------------------|--|---------------------------------------|--|--------------------------------------|--|--|--|---------------------------------------|--|---------------------------------------|--|---------------------------------------|---------------------------------------|--------------------------------------|--|--------------------------------------|--|---------------------------------------|--|---------------------------------------|-----------------------------------|--|--|---------------------------------------|--|-----------------------------------|--------------------------------------|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|--|--|--|--|--|--|--|--|------------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---------------------------------------|--|-------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--|--------------------------------------|--------------------------------------|---------------------------------------|--|--------------------------------------|--|--------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|-----------------------------------|--|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|--------------------------------------|--|-------------------------------------|----------------------------------|--------------------------------------|--|--------------------------------------|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--|---------------------------------------|--|--------------------------------------|--|-------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|--|---------------------------------------|--|------------------------------------|--|-----------------------------------|-----------------------------------|------------------------------------|---------------------------------|-----------------------------------|------------------------------------|------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|----------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <table border="1"> <tr> <td>1.00794<br/>1<br/>H<br/>14.30<br/>1312</td> <td colspan="17"></td> <td>4.002602<br/>2<br/>He<br/>5.193<br/>2372.3</td> </tr> <tr> <td>6.941<br/>3<br/>Li<br/>3.57<br/>520.2</td> <td>9.012182<br/>4<br/>Be<br/>1.82<br/>899.5</td> <td colspan="16"></td> <td>10.811<br/>5<br/>B<br/>1.026<br/>800.6</td> <td>12.0107<br/>6<br/>C<br/>0.710<br/>1086.5</td> <td>14.0067<br/>7<br/>N<br/>1.04<br/>1402.3</td> <td>15.9994<br/>8<br/>O<br/>0.92<br/>1313.9</td> <td>18.998403<br/>9<br/>F<br/>0.824<br/>1681.0</td> <td>20.1797<br/>10<br/>Ne<br/>1.03<br/>2080.7</td> </tr> <tr> <td>22.98976<br/>11<br/>Na<br/>1.23<br/>495.8</td> <td>24.398<br/>12<br/>Mg<br/>1.024<br/>737.7</td> <td colspan="16"></td> <td>26.98153<br/>13<br/>Al<br/>0.904<br/>577.5</td> <td>28.0855<br/>14<br/>Si<br/>0.712<br/>786.5</td> <td>30.97696<br/>15<br/>P<br/>0.770<br/>1011.8</td> <td>32.065<br/>16<br/>S<br/>0.705<br/>999.6</td> <td>35.453<br/>17<br/>Cl<br/>0.478<br/>1251.2</td> <td>39.948<br/>18<br/>Ar<br/>0.52<br/>1520.6</td> </tr> <tr> <td>39.0983<br/>19<br/>K<br/>0.757<br/>418.8</td> <td>40.078<br/>20<br/>Ca<br/>0.631<br/>589.8</td> <td>44.95591<br/>21<br/>Sc<br/>0.567<br/>633.1</td> <td>37.675<br/>22<br/>Ti<br/>0.522<br/>658.8</td> <td>50.9415<br/>23<br/>V<br/>0.489<br/>650.9</td> <td>51.9962<br/>24<br/>Cr<br/>0.448<br/>652.9</td> <td>54.93804<br/>25<br/>Mn<br/>0.479<br/>717.3</td> <td>55.845<br/>26<br/>Fe<br/>0.449<br/>762.5</td> <td>58.93319<br/>27<br/>Co<br/>0.421<br/>760.4</td> <td>58.934<br/>28<br/>Ni<br/>0.444<br/>737.1</td> <td>63.546<br/>29<br/>Cu<br/>0.385<br/>745.5</td> <td>65.38<br/>30<br/>Zn<br/>0.388<br/>906.4</td> <td>69.723<br/>31<br/>Ga<br/>0.371<br/>578.8</td> <td>72.64<br/>32<br/>Ge<br/>0.322<br/>762</td> <td>74.92160<br/>33<br/>As<br/>0.328<br/>947.0</td> <td>78.96<br/>34<br/>Se<br/>0.321<br/>941.0</td> <td>79.904<br/>35<br/>Br<br/>0.473<br/>1139.9</td> <td>83.798<br/>36<br/>Kr<br/>0.248<br/>1850.8</td> </tr> <tr> <td>85.4678<br/>37<br/>Rb<br/>0.363<br/>403</td> <td>87.62<br/>38<br/>Sr<br/>0.297<br/>549.5</td> <td>88.90585<br/>39<br/>Y<br/>0.298<br/>600.0</td> <td>91.224<br/>40<br/>Zr<br/>0.278<br/>640.1</td> <td>92.90638<br/>41<br/>Nb<br/>0.265<br/>652.1</td> <td>95.96<br/>42<br/>Mo<br/>0.251<br/>684.3</td> <td>98<br/>43<br/>Tc<br/>0.212<br/>702.0</td> <td>101.07<br/>44<br/>Ru<br/>0.238<br/>710.2</td> <td>102.9055<br/>45<br/>Rh<br/>0.243<br/>719.7</td> <td>106.42<br/>46<br/>Pd<br/>0.244<br/>804.4</td> <td>107.8682<br/>47<br/>Ag<br/>0.235<br/>731.0</td> <td>112.441<br/>48<br/>Cd<br/>0.231<br/>867.8</td> <td>114.818<br/>49<br/>In<br/>0.233<br/>558.3</td> <td>118.710<br/>50<br/>Sn<br/>0.228<br/>708.6</td> <td>121.760<br/>51<br/>Sb<br/>0.207<br/>834.0</td> <td>127.60<br/>52<br/>Te<br/>0.201<br/>869.3</td> <td>126.9044<br/>53<br/>I<br/>0.214<br/>1008.4</td> <td>131.293<br/>54<br/>Xe<br/>0.158<br/>1170.4</td> </tr> <tr> <td>132.9054<br/>55<br/>Cs<br/>0.242<br/>375.7</td> <td>137.327<br/>56<br/>Ba<br/>0.204<br/>502.9</td> <td>174.9668<br/>71<br/>Lu<br/>0.154<br/>523.5</td> <td>178.49<br/>72<br/>Hf<br/>0.144<br/>658.5</td> <td>180.9478<br/>73<br/>Ta<br/>0.140<br/>761.0</td> <td>183.84<br/>74<br/>W<br/>0.132<br/>770.0</td> <td>186.207<br/>75<br/>Re<br/>0.137<br/>760.0</td> <td>190.23<br/>76<br/>Os<br/>0.131<br/>840.0</td> <td>192.217<br/>77<br/>Ir<br/>0.131<br/>890.0</td> <td>195.084<br/>78<br/>Pt<br/>0.133<br/>870.0</td> <td>196.9665<br/>79<br/>Au<br/>0.129<br/>890.1</td> <td>200.59<br/>80<br/>Hg<br/>0.140<br/>1007.1</td> <td>204.3833<br/>81<br/>Tl<br/>0.129<br/>589.4</td> <td>207.2<br/>82<br/>Pb<br/>0.13<br/>589.4</td> <td>208.9804<br/>83<br/>Bi<br/>0.122<br/>703.0</td> <td>209<br/>84<br/>Po<br/>0.000<br/>812.1</td> <td>210<br/>85<br/>At<br/>0.000<br/>890.0</td> <td>220<br/>86<br/>Rn<br/>0.094<br/>1037.0</td> </tr> <tr> <td>223<br/>87<br/>Fr<br/>0.000<br/>380</td> <td>226<br/>88<br/>Ra<br/>0.092<br/>509.3</td> <td>262<br/>103<br/>Lr<br/>0.000<br/>470.0</td> <td>261<br/>104<br/>Rf<br/>0.000<br/>580.0</td> <td>262<br/>105<br/>Db<br/>0.000</td> <td>266<br/>106<br/>Sg<br/>0.000</td> <td>264<br/>107<br/>Bh<br/>0.000</td> <td>277<br/>108<br/>Hs<br/>0.000</td> <td>268<br/>109<br/>Mt<br/>0.000</td> <td>271<br/>110<br/>Ds<br/>0.000</td> <td>272<br/>111<br/>Rg<br/>0.000</td> <td>285<br/>112<br/>Cn<br/>0.000</td> <td>284<br/>113<br/>Uut<br/>0.000</td> <td>289<br/>114<br/>Fl<br/>0.000</td> <td>288<br/>115<br/>Uup<br/>0.000</td> <td>292<br/>116<br/>Lv<br/>0.000</td> <td>294<br/>117<br/>Uus<br/>0.000</td> <td>294<br/>118<br/>Uuo<br/>0.000</td> </tr> </table> |  |  |                                       |  |                                       |  |                                      |  |                                       |  |                                       |  |                                       |  |                                      |  |  | 1.00794<br>1<br>H<br>14.30<br>1312     |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       | 4.002602<br>2<br>He<br>5.193<br>2372.3 | 6.941<br>3<br>Li<br>3.57<br>520.2 | 9.012182<br>4<br>Be<br>1.82<br>899.5 |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  | 10.811<br>5<br>B<br>1.026<br>800.6 | 12.0107<br>6<br>C<br>0.710<br>1086.5 | 14.0067<br>7<br>N<br>1.04<br>1402.3 | 15.9994<br>8<br>O<br>0.92<br>1313.9 | 18.998403<br>9<br>F<br>0.824<br>1681.0 | 20.1797<br>10<br>Ne<br>1.03<br>2080.7 | 22.98976<br>11<br>Na<br>1.23<br>495.8 | 24.398<br>12<br>Mg<br>1.024<br>737.7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 26.98153<br>13<br>Al<br>0.904<br>577.5 | 28.0855<br>14<br>Si<br>0.712<br>786.5 | 30.97696<br>15<br>P<br>0.770<br>1011.8 | 32.065<br>16<br>S<br>0.705<br>999.6 | 35.453<br>17<br>Cl<br>0.478<br>1251.2 | 39.948<br>18<br>Ar<br>0.52<br>1520.6 | 39.0983<br>19<br>K<br>0.757<br>418.8 | 40.078<br>20<br>Ca<br>0.631<br>589.8 | 44.95591<br>21<br>Sc<br>0.567<br>633.1 | 37.675<br>22<br>Ti<br>0.522<br>658.8 | 50.9415<br>23<br>V<br>0.489<br>650.9 | 51.9962<br>24<br>Cr<br>0.448<br>652.9 | 54.93804<br>25<br>Mn<br>0.479<br>717.3 | 55.845<br>26<br>Fe<br>0.449<br>762.5 | 58.93319<br>27<br>Co<br>0.421<br>760.4 | 58.934<br>28<br>Ni<br>0.444<br>737.1 | 63.546<br>29<br>Cu<br>0.385<br>745.5 | 65.38<br>30<br>Zn<br>0.388<br>906.4 | 69.723<br>31<br>Ga<br>0.371<br>578.8 | 72.64<br>32<br>Ge<br>0.322<br>762 | 74.92160<br>33<br>As<br>0.328<br>947.0 | 78.96<br>34<br>Se<br>0.321<br>941.0 | 79.904<br>35<br>Br<br>0.473<br>1139.9 | 83.798<br>36<br>Kr<br>0.248<br>1850.8 | 85.4678<br>37<br>Rb<br>0.363<br>403 | 87.62<br>38<br>Sr<br>0.297<br>549.5 | 88.90585<br>39<br>Y<br>0.298<br>600.0 | 91.224<br>40<br>Zr<br>0.278<br>640.1 | 92.90638<br>41<br>Nb<br>0.265<br>652.1 | 95.96<br>42<br>Mo<br>0.251<br>684.3 | 98<br>43<br>Tc<br>0.212<br>702.0 | 101.07<br>44<br>Ru<br>0.238<br>710.2 | 102.9055<br>45<br>Rh<br>0.243<br>719.7 | 106.42<br>46<br>Pd<br>0.244<br>804.4 | 107.8682<br>47<br>Ag<br>0.235<br>731.0 | 112.441<br>48<br>Cd<br>0.231<br>867.8 | 114.818<br>49<br>In<br>0.233<br>558.3 | 118.710<br>50<br>Sn<br>0.228<br>708.6 | 121.760<br>51<br>Sb<br>0.207<br>834.0 | 127.60<br>52<br>Te<br>0.201<br>869.3 | 126.9044<br>53<br>I<br>0.214<br>1008.4 | 131.293<br>54<br>Xe<br>0.158<br>1170.4 | 132.9054<br>55<br>Cs<br>0.242<br>375.7 | 137.327<br>56<br>Ba<br>0.204<br>502.9 | 174.9668<br>71<br>Lu<br>0.154<br>523.5 | 178.49<br>72<br>Hf<br>0.144<br>658.5 | 180.9478<br>73<br>Ta<br>0.140<br>761.0 | 183.84<br>74<br>W<br>0.132<br>770.0 | 186.207<br>75<br>Re<br>0.137<br>760.0 | 190.23<br>76<br>Os<br>0.131<br>840.0 | 192.217<br>77<br>Ir<br>0.131<br>890.0 | 195.084<br>78<br>Pt<br>0.133<br>870.0 | 196.9665<br>79<br>Au<br>0.129<br>890.1 | 200.59<br>80<br>Hg<br>0.140<br>1007.1 | 204.3833<br>81<br>Tl<br>0.129<br>589.4 | 207.2<br>82<br>Pb<br>0.13<br>589.4 | 208.9804<br>83<br>Bi<br>0.122<br>703.0 | 209<br>84<br>Po<br>0.000<br>812.1 | 210<br>85<br>At<br>0.000<br>890.0 | 220<br>86<br>Rn<br>0.094<br>1037.0 | 223<br>87<br>Fr<br>0.000<br>380 | 226<br>88<br>Ra<br>0.092<br>509.3 | 262<br>103<br>Lr<br>0.000<br>470.0 | 261<br>104<br>Rf<br>0.000<br>580.0 | 262<br>105<br>Db<br>0.000 | 266<br>106<br>Sg<br>0.000 | 264<br>107<br>Bh<br>0.000 | 277<br>108<br>Hs<br>0.000 | 268<br>109<br>Mt<br>0.000 | 271<br>110<br>Ds<br>0.000 | 272<br>111<br>Rg<br>0.000 | 285<br>112<br>Cn<br>0.000 | 284<br>113<br>Uut<br>0.000 | 289<br>114<br>Fl<br>0.000 | 288<br>115<br>Uup<br>0.000 | 292<br>116<br>Lv<br>0.000 | 294<br>117<br>Uus<br>0.000 | 294<br>118<br>Uuo<br>0.000 | <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: left;"> <p>Masse atomique — 55.845</p> <p>Numéro atomique — 26</p> <p>Symbole chimique — Fe</p> <p>Chaleur spécifique — 0.449</p> <p>1ère énergie de ionisation — 762.5</p> </div> <div style="text-align: right;"> <p>— Solide</p> <p>— Gaz</p> <p>— Liquide</p> <p>— Artificiel</p> </div> </div> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.00794<br>1<br>H<br>14.30<br>1312  |  |  |                                       |  |                                       |  |                                      |  |                                       |  |                                       |  |                                       |  |                                      |  |  | 4.002602<br>2<br>He<br>5.193<br>2372.3 |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.941<br>3<br>Li<br>3.57<br>520.2   | 9.012182<br>4<br>Be<br>1.82<br>899.5   |  |                                       |  |                                       |  |                                      |  |                                       |  |                                       |  |                                       |  |                                      |  |  | 10.811<br>5<br>B<br>1.026<br>800.6     | 12.0107<br>6<br>C<br>0.710<br>1086.5  | 14.0067<br>7<br>N<br>1.04<br>1402.3    | 15.9994<br>8<br>O<br>0.92<br>1313.9   | 18.998403<br>9<br>F<br>0.824<br>1681.0 | 20.1797<br>10<br>Ne<br>1.03<br>2080.7 |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22.98976<br>11<br>Na<br>1.23<br>495.8   | 24.398<br>12<br>Mg<br>1.024<br>737.7   |  |                                       |  |                                       |  |                                      |  |                                       |  |                                       |  |                                       |  |                                      |  |  | 26.98153<br>13<br>Al<br>0.904<br>577.5 | 28.0855<br>14<br>Si<br>0.712<br>786.5 | 30.97696<br>15<br>P<br>0.770<br>1011.8 | 32.065<br>16<br>S<br>0.705<br>999.6   | 35.453<br>17<br>Cl<br>0.478<br>1251.2  | 39.948<br>18<br>Ar<br>0.52<br>1520.6  |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 39.0983<br>19<br>K<br>0.757<br>418.8  | 40.078<br>20<br>Ca<br>0.631<br>589.8   | 44.95591<br>21<br>Sc<br>0.567<br>633.1 | 37.675<br>22<br>Ti<br>0.522<br>658.8  | 50.9415<br>23<br>V<br>0.489<br>650.9   | 51.9962<br>24<br>Cr<br>0.448<br>652.9 | 54.93804<br>25<br>Mn<br>0.479<br>717.3 | 55.845<br>26<br>Fe<br>0.449<br>762.5 | 58.93319<br>27<br>Co<br>0.421<br>760.4 | 58.934<br>28<br>Ni<br>0.444<br>737.1  | 63.546<br>29<br>Cu<br>0.385<br>745.5   | 65.38<br>30<br>Zn<br>0.388<br>906.4   | 69.723<br>31<br>Ga<br>0.371<br>578.8   | 72.64<br>32<br>Ge<br>0.322<br>762     | 74.92160<br>33<br>As<br>0.328<br>947.0 | 78.96<br>34<br>Se<br>0.321<br>941.0  | 79.904<br>35<br>Br<br>0.473<br>1139.9  | 83.798<br>36<br>Kr<br>0.248<br>1850.8  |  |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 85.4678<br>37<br>Rb<br>0.363<br>403   | 87.62<br>38<br>Sr<br>0.297<br>549.5    | 88.90585<br>39<br>Y<br>0.298<br>600.0  | 91.224<br>40<br>Zr<br>0.278<br>640.1  | 92.90638<br>41<br>Nb<br>0.265<br>652.1 | 95.96<br>42<br>Mo<br>0.251<br>684.3   | 98<br>43<br>Tc<br>0.212<br>702.0       | 101.07<br>44<br>Ru<br>0.238<br>710.2 | 102.9055<br>45<br>Rh<br>0.243<br>719.7 | 106.42<br>46<br>Pd<br>0.244<br>804.4  | 107.8682<br>47<br>Ag<br>0.235<br>731.0 | 112.441<br>48<br>Cd<br>0.231<br>867.8 | 114.818<br>49<br>In<br>0.233<br>558.3  | 118.710<br>50<br>Sn<br>0.228<br>708.6 | 121.760<br>51<br>Sb<br>0.207<br>834.0  | 127.60<br>52<br>Te<br>0.201<br>869.3 | 126.9044<br>53<br>I<br>0.214<br>1008.4 | 131.293<br>54<br>Xe<br>0.158<br>1170.4 |  |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 132.9054<br>55<br>Cs<br>0.242<br>375.7  | 137.327<br>56<br>Ba<br>0.204<br>502.9  | 174.9668<br>71<br>Lu<br>0.154<br>523.5 | 178.49<br>72<br>Hf<br>0.144<br>658.5  | 180.9478<br>73<br>Ta<br>0.140<br>761.0 | 183.84<br>74<br>W<br>0.132<br>770.0   | 186.207<br>75<br>Re<br>0.137<br>760.0  | 190.23<br>76<br>Os<br>0.131<br>840.0 | 192.217<br>77<br>Ir<br>0.131<br>890.0  | 195.084<br>78<br>Pt<br>0.133<br>870.0 | 196.9665<br>79<br>Au<br>0.129<br>890.1 | 200.59<br>80<br>Hg<br>0.140<br>1007.1 | 204.3833<br>81<br>Tl<br>0.129<br>589.4 | 207.2<br>82<br>Pb<br>0.13<br>589.4    | 208.9804<br>83<br>Bi<br>0.122<br>703.0 | 209<br>84<br>Po<br>0.000<br>812.1    | 210<br>85<br>At<br>0.000<br>890.0      | 220<br>86<br>Rn<br>0.094<br>1037.0     |  |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 223<br>87<br>Fr<br>0.000<br>380   | 226<br>88<br>Ra<br>0.092<br>509.3      | 262<br>103<br>Lr<br>0.000<br>470.0     | 261<br>104<br>Rf<br>0.000<br>580.0    | 262<br>105<br>Db<br>0.000              | 266<br>106<br>Sg<br>0.000             | 264<br>107<br>Bh<br>0.000              | 277<br>108<br>Hs<br>0.000            | 268<br>109<br>Mt<br>0.000              | 271<br>110<br>Ds<br>0.000             | 272<br>111<br>Rg<br>0.000              | 285<br>112<br>Cn<br>0.000             | 284<br>113<br>Uut<br>0.000             | 289<br>114<br>Fl<br>0.000             | 288<br>115<br>Uup<br>0.000             | 292<br>116<br>Lv<br>0.000            | 294<br>117<br>Uus<br>0.000             | 294<br>118<br>Uuo<br>0.000             |  |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <table border="1"> <tr> <td>138.9054<br/>57<br/>La<br/>0.046<br/>538.1</td> <td>140.116<br/>58<br/>Ce<br/>0.192<br/>534.4</td> <td>140.9076<br/>59<br/>Pr<br/>0.193<br/>527.0</td> <td>144.242<br/>60<br/>Nd<br/>0.190<br/>533.1</td> <td>145<br/>61<br/>Pm<br/>0.167<br/>540.0</td> <td>150.36<br/>62<br/>Sm<br/>0.196<br/>544.5</td> <td>151.964<br/>63<br/>Eu<br/>0.182<br/>547.1</td> <td>157.25<br/>64<br/>Gd<br/>0.235<br/>593.4</td> <td>158.9253<br/>65<br/>Tb<br/>0.182<br/>565.8</td> <td>162.500<br/>66<br/>Dy<br/>0.17<br/>573.0</td> <td>164.9303<br/>67<br/>Ho<br/>0.165<br/>581.0</td> <td>167.259<br/>68<br/>Er<br/>0.168<br/>589.3</td> <td>168.9342<br/>69<br/>Tm<br/>0.160<br/>596.7</td> <td>173.054<br/>70<br/>Yb<br/>0.154<br/>603.4</td> </tr> <tr> <td>227<br/>89<br/>Ac<br/>0.123<br/>499.0</td> <td>232.0380<br/>90<br/>Th<br/>0.118<br/>587.0</td> <td>231.0358<br/>91<br/>Pa<br/>0.000<br/>568.0</td> <td>238.0289<br/>92<br/>U<br/>0.116<br/>597.6</td> <td>237<br/>93<br/>Np<br/>0.000<br/>604.5</td> <td>244<br/>94<br/>Pu<br/>0.13<br/>584.7</td> <td>243<br/>95<br/>Am<br/>0.000<br/>578.0</td> <td>247<br/>96<br/>Cm<br/>0.000<br/>581</td> <td>247<br/>97<br/>Bk<br/>0.000<br/>601.0</td> <td>251<br/>98<br/>Cf<br/>0.000<br/>608.0</td> <td>252<br/>99<br/>Es<br/>0.000<br/>619.0</td> <td>257<br/>100<br/>Fm<br/>0.000<br/>627.0</td> <td>258<br/>101<br/>Md<br/>0.000<br/>635.0</td> <td>259<br/>102<br/>No<br/>0.000<br/>642.</td> </tr> </table>  |  |  |                                       |  |                                       |  |                                      |  |                                       |  |                                       |  |                                       |  |                                      |  |  | 138.9054<br>57<br>La<br>0.046<br>538.1 | 140.116<br>58<br>Ce<br>0.192<br>534.4 | 140.9076<br>59<br>Pr<br>0.193<br>527.0 | 144.242<br>60<br>Nd<br>0.190<br>533.1 | 145<br>61<br>Pm<br>0.167<br>540.0      | 150.36<br>62<br>Sm<br>0.196<br>544.5  | 151.964<br>63<br>Eu<br>0.182<br>547.1 | 157.25<br>64<br>Gd<br>0.235<br>593.4 | 158.9253<br>65<br>Tb<br>0.182<br>565.8 | 162.500<br>66<br>Dy<br>0.17<br>573.0 | 164.9303<br>67<br>Ho<br>0.165<br>581.0 | 167.259<br>68<br>Er<br>0.168<br>589.3 | 168.9342<br>69<br>Tm<br>0.160<br>596.7 | 173.054<br>70<br>Yb<br>0.154<br>603.4 | 227<br>89<br>Ac<br>0.123<br>499.0 | 232.0380<br>90<br>Th<br>0.118<br>587.0 | 231.0358<br>91<br>Pa<br>0.000<br>568.0 | 238.0289<br>92<br>U<br>0.116<br>597.6 | 237<br>93<br>Np<br>0.000<br>604.5      | 244<br>94<br>Pu<br>0.13<br>584.7  | 243<br>95<br>Am<br>0.000<br>578.0    | 247<br>96<br>Cm<br>0.000<br>581 | 247<br>97<br>Bk<br>0.000<br>601.0 | 251<br>98<br>Cf<br>0.000<br>608.0 | 252<br>99<br>Es<br>0.000<br>619.0 | 257<br>100<br>Fm<br>0.000<br>627.0 | 258<br>101<br>Md<br>0.000<br>635.0 | 259<br>102<br>No<br>0.000<br>642. |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |            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                 |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 138.9054<br>57<br>La<br>0.046<br>538.1  | 140.116<br>58<br>Ce<br>0.192<br>534.4  | 140.9076<br>59<br>Pr<br>0.193<br>527.0 | 144.242<br>60<br>Nd<br>0.190<br>533.1 | 145<br>61<br>Pm<br>0.167<br>540.0      | 150.36<br>62<br>Sm<br>0.196<br>544.5  | 151.964<br>63<br>Eu<br>0.182<br>547.1  | 157.25<br>64<br>Gd<br>0.235<br>593.4 | 158.9253<br>65<br>Tb<br>0.182<br>565.8 | 162.500<br>66<br>Dy<br>0.17<br>573.0  | 164.9303<br>67<br>Ho<br>0.165<br>581.0 | 167.259<br>68<br>Er<br>0.168<br>589.3 | 168.9342<br>69<br>Tm<br>0.160<br>596.7 | 173.054<br>70<br>Yb<br>0.154<br>603.4 |  |                                      |  |  |  |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 227<br>89<br>Ac<br>0.123<br>499.0   | 232.0380<br>90<br>Th<br>0.118<br>587.0 | 231.0358<br>91<br>Pa<br>0.000<br>568.0 | 238.0289<br>92<br>U<br>0.116<br>597.6 | 237<br>93<br>Np<br>0.000<br>604.5      | 244<br>94<br>Pu<br>0.13<br>584.7      | 243<br>95<br>Am<br>0.000<br>578.0      | 247<br>96<br>Cm<br>0.000<br>581      | 247<br>97<br>Bk<br>0.000<br>601.0      | 251<br>98<br>Cf<br>0.000<br>608.0     | 252<br>99<br>Es<br>0.000<br>619.0      | 257<br>100<br>Fm<br>0.000<br>627.0    | 258<br>101<br>Md<br>0.000<br>635.0     | 259<br>102<br>No<br>0.000<br>642.     |  |                                      |  |  |  |                                       |  |                                       |  |                                       |                                       |                                      |  |                                      |  |                                       |  |                                       |                                   |  |  |                                       |  |                                   |                                      |                                 |                                   |                                   |                                   |                                    |                                    |                                   |  |  |  |  |  |  |  |  |  |                                    |                                      |                                     |                                     |  |                                       |                                       |                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                       |  |                                     |                                       |                                      |                                      |                                      |  |                                      |                                      |                                       |  |                                      |  |                                      |                                      |                                     |                                      |                                   |  |                                     |                                       |                                       |                                     |                                     |                                       |                                      |  |                                     |                                  |                                      |  |                                      |  |                                       |                                       |                                       |                                       |                                      |  |  |  |                                       |  |                                      |  |                                     |                                       |                                      |                                       |                                       |  |                                       |  |                                    |  |                                   |                                   |                                    |                                 |                                   |                                    |                                    |                           |                           |                           |                           |                           |                           |                           |                           |                            |                           |                            |                           |                            |                            |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |