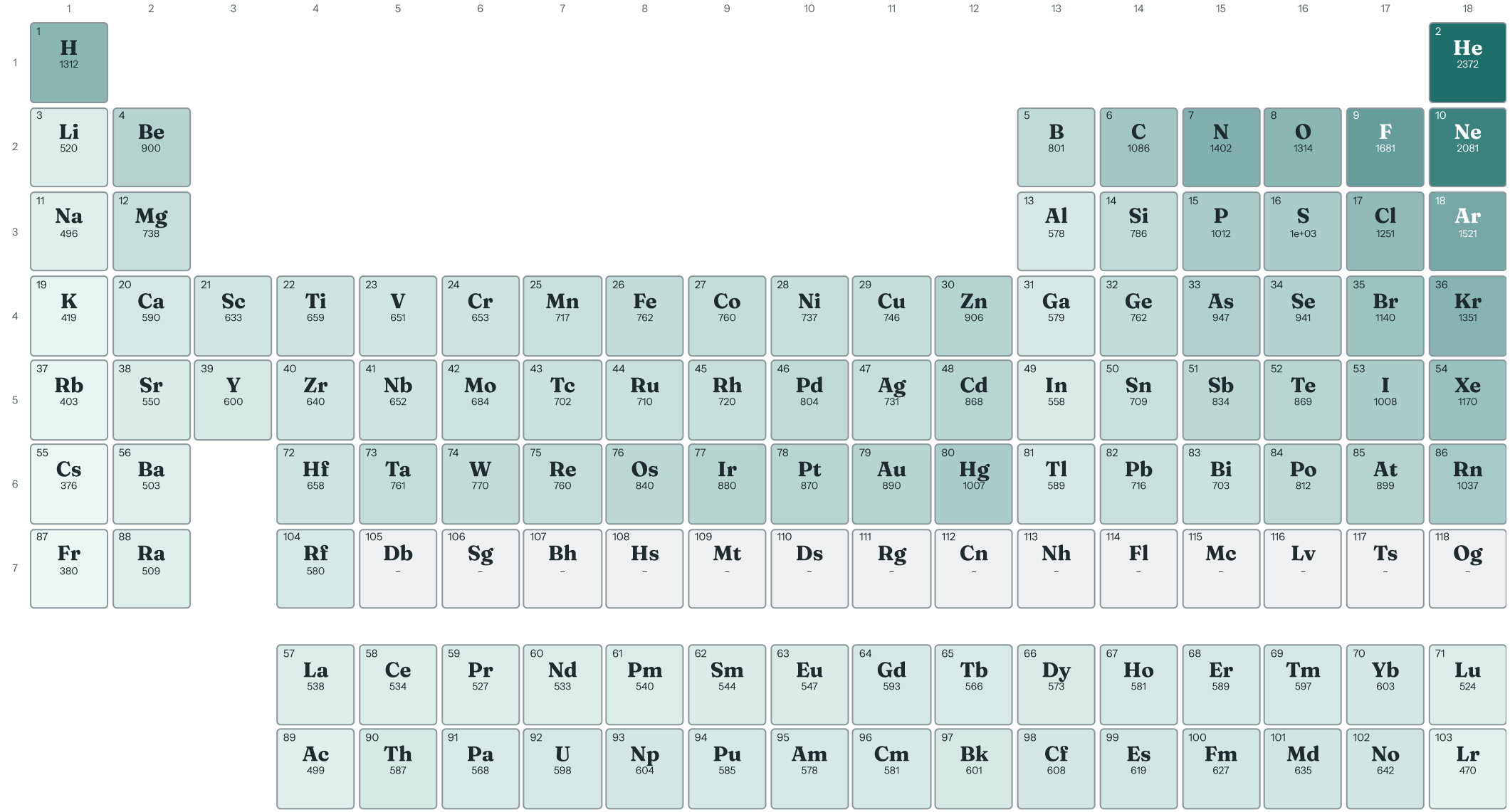
Periodic Table of First Ionization Energy



https://periodictable.page/

Periodic Table PDF: First Ionization Energy Heat Map: notes

About this sheet

Every element shaded by first ionization energy in kJ/mol, on a linear scale, with darker tiles for more energy needed to remove the first electron. The printed value is on each tile and tiles with no data are grey. The highest is helium (2372) and the lowest is cesium (375.7).

Best for

Teaching the ionization energy trend and why the noble gases hold their electrons so tightly.

Printing

Heat maps rely on shading, so print in color. In grayscale the darker tiles still read as higher values.

What the data shows

104 of the 118 elements have a value for first ionization energy, so 14 tiles are grey. The three highest are helium (2372), neon (2081) and fluorine (1681) and the three lowest are cesium (375.7), francium (380) and rubidium (403), all in kJ/mol.

Averaged by family, the noble gases sit highest (1589 kJ/mol) and the alkali metals lowest (432.2 kJ/mol).

The median element is 658.6 kJ/mol, so half the elements fall below that shade.

How the table is organised

Atomic number counts the protons in an atom's nucleus and fixes each element's place in the table. Moving down a group adds a new electron shell, so atomic radius grows and metallic character increases.

More periodic table PDFs are free to download at https://periodictable.page/periodic-table-pdf/.