

## B. Ionization Energy of Iron Ions

[Source: C. Corliss and J. Sugar, J. Phys. Chem. Ref. Data 11, 135 (1982)]

Spectrum	Ground State Configuration	Ground Level	Ionization Energy (eV)
Fe I	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$	$^5D_4$	7.870
Fe II	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s$	$^6D_{3/2}$	16.1879
Fe III	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^6$	$^5D_4$	30.652
Fe IV	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$	$^6S_{3/2}$	54.8
Fe V	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^4$	$^5D_0$	75.0
Fe VI	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^3$	$^4F_{3/2}$	99.1
Fe VII	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^2$	$^3F_2$	124.98
Fe VIII	$1s^2 2s^2 2p^6 3s^2 3p^6 3d$	$^2D_{3/2}$	151.061
Fe IX	$1s^2 2s^2 2p^6 3s^2 3p^6$	$^1S_0$	233.6
Fe X	$1s^2 2s^2 2p^6 3s^2 3p^5$	$^2P_{3/2}^o$	262.1
Fe XI	$1s^2 2s^2 2p^6 3s^2 3p^4$	$^3P_2$	290.3
Fe XII	$1s^2 2s^2 2p^6 3s^2 3p^3$	$^4S_{3/2}^o$	330.8
Fe XIII	$1s^2 2s^2 2p^6 3s^2 3p^2$	$^3P_0$	361.0
Fe XIV	$1s^2 2s^2 2p^6 3s^2 3p$	$^2P_{1/2}^o$	392.2
Fe XV	$1s^2 2s^2 2p^6 3s^2$	$^1S_0$	457.0
Fe XVI	$1s^2 2s^2 2p^6 3s$	$^2S_{1/2}$	489.264
Fe XVII	$1s^2 2s^2 2p^6$	$^1S_0$	1262.2
Fe XVIII	$1s^2 2s^2 2p^5$	$^2P_{3/2}^o$	1362
Fe XIX	$1s^2 2s^2 2p^4$	$^3P_2$	1469
Fe XX	$1s^2 2s^2 2p^3$	$^4S_{3/2}^o$	1582.0
Fe XXI	$1s^2 2s^2 2p^2$	$^3P_0$	1689
Fe XXII	$1s^2 2s^2 2p$	$^2P_{1/2}^o$	1799
Fe XXIII	$1s^2 2s^2$	$^1S_0$	1958.6
Fe XXIV	$1s^2 2s$	$^2S_{1/2}$	2045.8
Fe XXV	$1s^2$	$^1S_0$	8828.14
Fe XXVI	$1s$	$^2S_{1/2}$	9277.65