

A mnemonic for one-letter elements in the periodic table of elements

Janko Kokošar¹

¹*RCJ d.o.o. DEVELOPMENT CENTRE JESENICE, Cesta Borisa Kidriča 44, SI-4270 Jesenice, Slovenia, janko.kokosar@gmail.com*

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Abstract

A mnemonic for one-letter elements in the periodic table of elements is shown. A mapping of these letters to keyboard letters is shown. This is also a basis for mnemonics for remembering the other chemical elements. At the same time this is also a mnemonic for remembering some letters of the keyboard.

In the periodic table of elements (Table 2.)[1] let us see 14 marked symbols for elements which are written with one letter. They are enlarged, marked with bold, and with enlarged fonts for relative atomic mass and atomic number.^{1 2} To easier remember which are these elements, let us look at them in Table 1.

Table 1: On the keyboard, the letters equal to one-letter elements are shown as bold and uppercase, and they present also chemical elements. Other letters do not present any one-letter chemical element.

q	W	e	r	t	Y	U	I	O	P
a	S	d	F	g	H	j	K	l	
z	x	C	V	B	N	m			

The pattern is easily memorable because it is linked, and the pattern of the middle row is zig-zag. Besides, the middle row is marked the same as in Ref. [3].

If someone should or wish to remember periodic table of elements, then this mnemonic helps us as one step, together with many other mnemonics. This is also a basis for further mnemonics. Letters on the keyboard can also be easier memorable with this mnemonic.

The keyboard should be known to everyone, it is also visual and tactile association.

References

- [1] Mats Dahlgren (1996) “pertab.tex,” <https://download.tuxfamily.org/viettug/sarovar/tex/pertab.tex>, Copyright © 1995 - 1997 by Mats Dahlgren.
- [2] Wikipedia, (2021) “Periodic table,” https://en.wikipedia.org/wiki/Periodic_table.
- [3] Janko Kokošar, (2020) “The Keyboard Locations of Non-pulmonic Consonants as a Mnemonic for Use of the Preposition ‘with’ in Slovenian Grammar,” <https://vixra.org/abs/2008.0220>.

¹The table is obsolete because symbols of some elements over 100 are nowadays different.[2] For instance, *Db* is nowadays for 105, in Table 2 is for 104.[2]

²The modification according to the Dahlgren’s periodic table of elements[1] are only fonts of one-letter elements, therefore that they are enlarged, marked with bold, and with enlarged fonts for relative atomic masses and atomic numbers.

Table 2: Periodic table of the elements where one-letter symbols are additionally marked, with relative atomic masses 1993 according to IUPAC

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																														
(I)	(II)											(III)	(IV)	(V)	(VI)	(VII)	(VIII)																														
1 H 1.00794	4 Be 9.012182	Atomic number Symbol Relative atomic mass*																																													
3 Li 6.941	12 Mg 24.3050																																														
11 Na 22.989768	20 Ca 40.078	21 Sc 44.955910	22 Ti 47.867	23 V 50.9415	24 Cr 51.9961	25 Mn 54.93805	26 Fe 55.845	27 Co 58.93320	28 Ni 58.6934	29 Cu 63.546	30 Zn 65.39	31 Ga 69.723	32 Ge 72.61	33 As 74.92159	34 Se 78.96	35 Br 79.904	36 Kr 83.80																														
37 Rb 85.4678	38 Sr 87.62	39 Y 88.90585	40 Zr 91.224	41 Nb 92.90638	42 Mo 95.94	43 Tc (98)	44 Ru 101.07	45 Rh 102.90550	46 Pd 106.42	47 Ag 107.8682	48 Cd 112.411	49 In 114.818	50 Sn 118.710	51 Sb 121.760	52 Te 127.60	53 I 126.90447	54 Xe 131.29																														
55 Cs 132.90543	56 Ba 137.327	La ^a - Lu	72 Hf 178.49	73 Ta 180.9479	74 W 183.84	75 Re 186.207	76 Os 190.23	77 Ir 192.217	78 Pt 195.08	79 Au 196.96654	80 Hg 200.59	81 Tl 204.3833	82 Pb 207.2	83 Bi 208.98037	84 Po (209)	85 At (210)	86 Rn (222)																														
87 Fr (223)	88 Ra (226)	Ac- Lr	104 Db (261)	105 (262)	106 Rf (263)	107 Bh (262)	108 (265)	109 Mt (266)	**																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>57 La 138.9055</td> <td>58 Ce 140.115</td> <td>59 Pr 140.90765</td> <td>60 Nd 144.24</td> <td>61 Pm (145)</td> <td>62 Sm 150.36</td> <td>63 Eu 151.965</td> <td>64 Gd 157.25</td> <td>65 Tb 158.92534</td> <td>66 Dy 162.50</td> <td>67 Ho 164.93032</td> <td>68 Er 167.26</td> <td>69 Tm 168.93421</td> <td>70 Yb 173.04</td> <td>71 Lu 174.967</td> </tr> <tr> <td>89 Ac (227)</td> <td>90 Th (232.0381)</td> <td>91 Pa (231.03588)</td> <td>92 U (238.0289)</td> <td>93 Np (237)</td> <td>94 Pu (239)</td> <td>95 Am (243)</td> <td>96 Cm (247)</td> <td>97 Bk (247)</td> <td>98 Cf (251)</td> <td>99 Es (252)</td> <td>100 Fm (257)</td> <td>101 Md (258)</td> <td>102 No (259)</td> <td>103 Lr (262)</td> </tr> </table>																		57 La 138.9055	58 Ce 140.115	59 Pr 140.90765	60 Nd 144.24	61 Pm (145)	62 Sm 150.36	63 Eu 151.965	64 Gd 157.25	65 Tb 158.92534	66 Dy 162.50	67 Ho 164.93032	68 Er 167.26	69 Tm 168.93421	70 Yb 173.04	71 Lu 174.967	89 Ac (227)	90 Th (232.0381)	91 Pa (231.03588)	92 U (238.0289)	93 Np (237)	94 Pu (239)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)	103 Lr (262)
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* Relative atomic mass based on $A_r(^{12}\text{C}) \equiv 12$ (after IUPAC "Atomic Weights of the Elements 1993", *Pure and Applied Chemistry*, **1994**, 66(12), 2423-2444). For elements which lack stable isotope(s) is the mass number for the most stable isotope given in parentheses, or for Th, Pa och U the relative atomic mass given by IUPAC for the isotopic mixture present on earth.

** Chemical symbols for elements 104 – 109 according to IUPAC "Names and Symbols of Transfermium Elements (IUPAC Recommendations 1994)", *Pure and Applied Chemistry*, **1994**, 66(12), 2419-2421.