

Cosmochemical Periodic Table of the Elements in the Solar System

1 1.00e12 H																	2 9.68e10 He < 3				
3 2140 Li 1142 s	4 23.6 Be 1452 s	<div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;"> 1 1.00e12 EL Tc (K) </div> <div> number of atoms per trillion (10¹²) H atoms element symbol temperature where 50% of an element is in the gas and 50% in solids and liquids at a total pressure of 0.0001 bar box color: lithophile chalcophile siderophile atmophile s=solid solution </div> <div style="margin-left: 20px;"> refractory common volatile highly volatile </div> </div>														5 725 B 908 s	6 2.77e8 C 40	7 8.18e7 N 123	8 6.07e8 O 180	9 31,000 F 734 s	10 1.27e8 Ne 9.1
11 2,230,000 Na 958 s	12 3.95e7 Mg 1336	13 3,260,000 Al 1653	14 3.86e7 Si 1310	15 320,000 P 1229	16 1.62e7 S 664	17 199,000 Cl 948 s	18 3,570,000 Ar 47														
19 145,000 K 1006 s	20 2,330,000 Ca 1517	21 1,330 Sc 1659 s	22 95,300 Ti 1582	23 11,000 V 1429 s	24 504,000 Cr 1296 s	25 355,000 Mn 1158 s	26 3.27e7 Fe 1334	27 90,400 Co 1352 s	28 1,890,000 Ni 1353 s	29 20,900 Cu 1037 s	30 50,000 Zn 726 s	31 1,410 Ga 968 s	32 4,420 Ge 883 s	33 235 As 1065 s	34 2,600 Se 697 s	35 413 Br 546 s	36 2,150 Kr 52				
37 274 Rb 800 s	38 902 Sr 1464 s	39 179 Y 1659 s	40 416 Zr 1741	41 30.1 Nb 1559 s	42 98.3 Mo 1590 s	43 Tc	44 68.7 Ru 1551 s	45 14.3 Rh 1392 s	46 52.4 Pd 1324 s	47 18.9 Ag 996 s	48 60.7 Cd 652 s	49 6.86 In 536 s	50 139 Sn 704 s	51 12.1 Sb 979 s	52 181 Te 709 s	53 42.3 I 535 s	54 210 Xe 68				
55 14.3 Cs 799 s	56 172 Ba 1455 s	57 17.6 La 1578 s	72 6.01 Hf 1684 s	73 0.811 Ta 1573 s	74 5.28 W 1789 s	75 2.14 Re 1821 s	76 26.2 Os 1812 s	77 25.9 Ir 1603 s	78 49.1 Pt 1408 s	79 7.50 Au 1060 s	80 17.7 Hg 252 s	81 7.03 Tl 532 s	82 128 Pb 727 s	83 5.33 Bi 746 s	84 Po	85 At	86 Rn				
87 Fr	88 Ra	89 Ac	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112	113	114	115	116	(117)	118				
					58 45.5 Ce 1478 s	59 6.55 Pr 1582 s	60 33.0 Nd 1602 s	61 Pm	62 10.2 Sm 1590 s	63 3.79 Eu 1356 s	64 13.9 Gd 1659 s	65 2.44 Tb 1659 s	66 15.6 Dy 1659 s	67 3.51 Ho 1659 s	68 10.1 Er 1659 s	69 1.56 Tm 1659 s	70 9.88 Yb 1487 s	71 1.46 Lu 1659 s			
					90 1.35 Th 1659 s	91 Pa	92 0.344 U 1610 s	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr			

(c) 2003 K. Lodders

K. Lodders, 2003, Solar System Abundances and Condensation Temperatures of the Elements, *Astrophys. J.* 591, 1220-1247

Lodders, K., Palme H., & Gail, H.P., 2009, Abundances of the elements in the solar system. In Landolt-Börnstein, New Series, Vol. VI/4B, Chap. 4.4, J.E. Trümper (ed.), Berlin: Springer-Verlag, p. 560-630