

Values of some physical constants

Quantity	Symbol	Value
Avogadro's number	N_0	6.0222×10^{23}
Planck constant	h	6.6262×10^{-27} erg-sec
	$h/2\pi$	1.0546×10^{-27} erg-sec
Boltzmann constant	k	1.3806×10^{-16} erg/molecule-deg K
gas constant	R	8.3143×10^7 ergs/mole-deg K
		1.9872 cal/mole-deg K
speed of light	c	2.9979×10^{10} cm/sec
proton charge	e	4.8032×10^{-10} esu
electron mass	m_e	9.1096×10^{-28} g
atomic mass unit	amu	1.6605×10^{-24} g
Bohr magneton	μ_B	9.2741×10^{-21} erg/gauss
nuclear magneton	μ_N	5.0509×10^{-24} erg/gauss

Source: B. N. Taylor, W. H. Parker, and D. N. Langenberg, Rev. Mod. Phys., 41, p. 375, 1969

Energy conversion factors

	ergs	eV	cm⁻¹	°K	kcal	kcal/mole	atomic units
1 erg	1	6.2420×10^{11}	5.0348×10^{15}	7.2441×10^{15}	2.3901×10^{-11}	1.4394×10^{13}	2.294×10^{10}
1 eV	1.6021×10^{-12}	1	8.0657×10^3	1.1605×10^4	3.8390×10^{-23}	2.3119×10^1	3.675×10^{-2}
1cm ⁻¹	1.9862×10^{-16}	1.2398×10^{-4}	1	1.4388	4.7471×10^{-27}	2.8588×10^{-3}	4.556×10^{-6}
1°K	1.3804×10^{-16}	8.6167×10^{-5}	6.9502×10^{-1}	1	3.2993×10^{-27}	1.9869×10^{-3}	3.116×10^{-6}
1 kcal	4.1840×10^{10}	2.6116×10^{22}	2.1066×10^{26}	3.3009×10^{26}	1	6.0222×10^{23}	9.597×10^{20}
1 kcal/mole	6.9446×10^{-14}	4.3348×10^{-2}	3.4964×10^2	5.0307×10^2	1.6598×10^{-24}	1	1.594×10^{-3}
1 atomic unit	4.360×10^{-11}	27.21	2.195×10^5	3.158×10^5	1.042×10^{-21}	6.275×10^2	1