26.3: Appendix B. Fundamental Constants†

Quantity	Symbol	Value	Unit
speed of light in a vacuum	c	299792458	$m\ s^{-1}$
Planck constant	h	$6.62606876 \times 10^{-34}$	J s
elementary charge	e	$1.602176462 \times 10^{-19}$	C
electron mass	m_e	$9.10938188 \times 10^{-31}$	kg
proton mass	m_p	$1.67262158 \times 10^{-27}$	kg
Avogadro constant	$\overline{N}$	$6.02214199 \times 10^{23}$	mol^{-1}
Faraday constant	F	96485.3415	$C\ mol^{-1}$
molar gas constant	R	8.314472	$J\ mol^{-1}\ K^{-1}$
	R	8.314472×10^{-2}	$bar\ L\ mol^{-1}\ K^{-1}$
	R	8.205745×10^{-2}	$atm\ L\ mol^{-1}\ K^{-1}$
	R	1.987206	$cal\ mol^{-1}\ K^{-1}$
Boltzmann constant	k	$1.3806503 \times 10^{-23}$	$J\ K^{-1}$
standard acceleration of free fall at the earth's surface†	g	9.806650	$m\ s^{-2}$

†Source: 1998 CODATA recommended values. Peter J. Mohr and Barry N. Taylor, ***Reviews of Modern Physics***, Vol. 72, No. 2, pp. 351-495, 2000. See www.physics.nist.gov/constants.

†While it is included here for convenience, g is not a Fundamental Constant. Value from David R. Lide, ***CRC Handbook of Chemistry and Physics***, 79th Ed., CRC Press, 1999-2000, pp. 1-27, reproduced from ***NIST Special Publication 811, Guide for the Use of the International System of Units*** (Superintendent of Documents, U. S. Government Printing Office, 1991).