CONVERSION FACTORS FOR ENERGY UNITS

If greater accuracy is required, use the *Energy Equivalents* section of the *Fundamental Physical Constants* table.

	Wavenumber $\tilde{\nu}$ cm^{-1}	**Frequency ν MHz**	**Energy E aJ**	**Energy E eV**	**Energy E E_h**	**Molar energy E_m kJ/mol**	**Molar energy E_m kcal/mol**	**Temperature T K**
$\tilde{\nu}$: 1 cm^{-1}	$\doteq$ 1	2.997925×10^{4}	1.986447×10^{-5}	1.239842×10^{-4}	4.556335×10^{-6}	11.96266×10^{-3}	2.85914×10^{-3}	1.438769
ν: 1 MHz	$\doteq 3.33564 \times 10^{-5}$	1	6.626076×10^{-10}	4.135669×10^{-9}	1.519830×10^{-10}	3.990313×10^{-7}	9.53708×10^{-8}	4.79922×10^{-5}
1 aJ	$\doteq$ 50341.1	1.509189×10^{9}	1	6.241506	0.2293710	602.2137	143.9325	7.24292×10^{4}
E: 1 eV	$\doteq$ 8065.54	2.417988×10^{8}	0.1602177	1	3.674931×10^{-2}	96.4853	23.0605	1.16045×10^{4}
E_h	$\doteq$ 219474.63	6.579684×10^{9}	4.359748	27.2114	1	2625.500	627.510	3.15773×10^{5}
E_m: 1 kJ/mol	$\doteq$ 83.5935	2.506069×10^{6}	1.660540×10^{-3}	1.036427×10^{-2}	3.808798×10^{-4}	1	0.239006	120.272
1 kcal/mol	$\doteq$ 349.755	1.048539×10^{7}	6.947700×10^{-3}	4.336411×10^{-2}	1.593601×10^{-3}	4.184	1	503.217
T: 1 K	$\doteq$ 0.695039	2.08367×10^{4}	1.380658×10^{-5}	8.61738×10^{-5}	3.16683×10^{-6}	8.31451×10^{-3}	1.98722×10^{-3}	1

Examples of the use of this table:

$$1 \text{ aJ} \doteq 50341 \text{ cm}^{-1}$$

$$1 \text{ eV} \doteq 96.4853 \text{ kJ mol}^{-1}$$

The symbol $\doteq$ should be read as meaning corresponds to or is equivalent to.

$E = h\nu = hc\tilde{\nu} = kT$; $E_m = N_A E$; E_h is the Hartree energy