

APPENDIX A

SELECTED CONSTANTS

<u>NAME</u>	<u>VALUE</u>
Avogadro's Number (Physical . N _o Scale)	6.022x10 ²³ molecules/mole
Base of Natural Logarithms. . e	2.71828
Curie Ci	3.7x10 ¹⁰ dis/s
Electron Charge e	1.602x10 ⁻¹⁹ coulombs
Energy Equivalent of Atomic . uc ² Mass Unit	931.68 MeV
Energy Equivalent of. mc ² Electron Mass	0.511 MeV
Mass, Alpha Particle. m _α	6.60x10 ⁻²⁷ kg = 4.002603 u
Mass, Electron. m _e	9.1095x10 ⁻³¹ kg = 0.000549 u
Mass, H-Atom. m _H	1.6736x10 ⁻²⁷ kg = 1.007825 u
Mass, Neutron m _n	1.6750x10 ⁻²⁷ kg = 1.008665 u
Mass, Proton. m _p	1.6726x10 ⁻²⁷ kg = 1.007276 u
Mass Unit, Unified Atomic . . u	1.6606x10 ⁻²⁷ kg = 1.0000 u
Microcurie. μCi	10 ⁻⁶ curies = 3.7x10 ⁴ dis/s
Micro-microcurie. μμCi (picocurie). pCi	10 ⁻¹² curies=3.7x10 ⁻² dis/s
Millicurie. mCi	10 ⁻³ curies = 3.7x10 ⁷ dis/s
Planck's Constant h	6.626 x 10 ⁻³⁴ Js
Pi. π	3.1416 ...
Velocity of Light c	2.998 x 10 ⁸ ~ 3x10 ⁸ m/s
Wavelength Associated λ _o with 1 eV	12397.67 Angstroms

