

**Table 102: Muons in Adenine (C<sub>5</sub>H<sub>5</sub>N<sub>5</sub>)**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.51903	1.350	71.4	0.20908	3.0271	0.1295	2.4219	3.1724	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]	
10.0 MeV	$4.704 \times 10^1$	7.495				7.495	$7.371 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.845				5.845	$1.348 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.564				4.564	$2.523 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.540				3.540	$5.046 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.022				3.022	$8.123 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.264				2.264	$2.389 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.119				2.120	$3.305 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.972				1.972	$5.271 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.887				1.887	$8.393 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.854			0.000	1.855	$1.375 \times 10^2$	
318. MeV	$4.105 \times 10^2$	1.854			0.000	1.854	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	1.860			0.000	1.860	$1.914 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.929	0.000		0.000	1.930	$4.027 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.961	0.000		0.000	1.962	$5.055 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.013	0.000		0.001	2.014	$7.066 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.070	0.001	0.000	0.001	2.072	$1.000 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	2.135	0.001	0.001	0.001	2.138	$1.475 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.180	0.001	0.001	0.002	2.184	$1.937 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.283	0.003	0.003	0.004	2.293	$3.719 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.314	0.004	0.004	0.005	2.328	$4.584 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.360	0.006	0.007	0.007	2.380	$6.283 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.406	0.010	0.011	0.009	2.436	$8.773 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.455	0.016	0.020	0.013	2.505	$1.282 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.489	0.023	0.029	0.018	2.560	$1.676 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.568	0.053	0.071	0.034	2.727	$3.188 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.592	0.069	0.094	0.042	2.798	$3.912 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.628	0.102	0.142	0.059	2.931	$5.308 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.666	0.154	0.217	0.084	3.121	$7.291 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.709	0.242	0.345	0.125	3.422	$1.035 \times 10^5$	
400. GeV	$4.001 \times 10^5$	2.740	0.335	0.479	0.167	3.720	$1.315 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.814	0.719	1.035	0.338	4.905	$2.248 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.838	0.917	1.322	0.424	5.502	$2.633 \times 10^5$	
1.06 TeV	$1.064 \times 10^6$	2.845	0.980	1.413	0.452	5.691	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	2.875	1.317	1.895	0.602	6.689	$3.292 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.915	1.931	2.772	0.871	8.490	$4.086 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.960	2.961	4.233	1.335	11.490	$5.095 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.993	4.009	5.715	1.806	14.524	$5.868 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.073	8.254	11.683	3.771	26.781	$7.865 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.100	10.400	14.690	4.783	32.973	$8.537 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.140	14.683	20.680	6.867	45.371	$9.567 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.184	21.163	29.715	10.071	64.133	$1.067 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	3.234	31.952	44.748	15.632	95.566	$1.194 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.270	42.798	59.831	21.340	127.240	$1.285 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.360	86.287	120.213	45.297	255.156	$1.502 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.389	108.087	150.440	57.716	319.633	$1.572 \times 10^6$	