

**Table 198: Muons in Methanol (CH<sub>3</sub>OH)**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.56176	0.791	67.6	0.08970	3.5477	0.2529	2.7639	3.5160	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	$4.704 \times 10^1$	8.169				8.169	$6.759 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	6.369				6.369	$1.236 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.972				4.972	$2.315 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.855				3.855	$4.631 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.291				3.291	$7.457 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.469				2.469	$2.194 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.321				2.322	$3.032 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.166				2.166	$4.823 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.074				2.074	$7.664 \times 10^1$	
300. MeV	$3.917 \times 10^2$	2.039			0.000	2.039	$1.254 \times 10^2$	
318. MeV	$4.105 \times 10^2$	2.038			0.000	2.039	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	2.045			0.000	2.045	$1.744 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.121	0.000		0.000	2.122	$3.665 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.156	0.000		0.000	2.157	$4.600 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.213	0.000		0.001	2.214	$6.429 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.275	0.001	0.000	0.001	2.277	$9.099 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.346	0.001	0.001	0.001	2.349	$1.342 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.395	0.001	0.001	0.002	2.400	$1.763 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.508	0.003	0.003	0.004	2.518	$3.385 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.542	0.004	0.004	0.005	2.556	$4.173 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.592	0.007	0.007	0.007	2.612	$5.720 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.642	0.010	0.012	0.009	2.674	$7.989 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.696	0.017	0.021	0.014	2.748	$1.168 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.733	0.024	0.030	0.018	2.805	$1.528 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.818	0.055	0.073	0.034	2.981	$2.909 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.844	0.071	0.097	0.043	3.055	$3.571 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.884	0.105	0.146	0.059	3.194	$4.851 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.925	0.158	0.223	0.084	3.390	$6.674 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.972	0.249	0.354	0.126	3.702	$9.496 \times 10^4$	
400. GeV	$4.001 \times 10^5$	3.005	0.344	0.492	0.168	4.009	$1.209 \times 10^5$	
800. GeV	$8.001 \times 10^5$	3.085	0.739	1.063	0.339	5.227	$2.080 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.111	0.944	1.359	0.427	5.841	$2.442 \times 10^5$	
1.14 TeV	$1.136 \times 10^6$	3.126	1.082	1.557	0.487	6.253	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	3.151	1.356	1.947	0.605	7.059	$3.064 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	3.194	1.989	2.849	0.876	8.908	$3.819 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	3.243	3.051	4.351	1.342	11.988	$4.784 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.278	4.132	5.874	1.817	15.102	$5.526 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.366	8.512	12.010	3.793	27.681	$7.453 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.394	10.728	15.101	4.811	34.035	$8.104 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.438	15.150	21.259	6.910	46.758	$9.102 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.485	21.843	30.549	10.135	66.012	$1.018 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	3.539	32.987	46.004	15.735	98.266	$1.141 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.579	44.194	61.510	21.483	130.766	$1.229 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.676	89.141	123.586	45.616	262.020	$1.441 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.707	111.678	154.662	58.131	328.179	$1.509 \times 10^6$	