

**Table 204: Muons in Muscle-equivalent liquid without sucrose**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.55014	1.070	74.2	0.09143	3.4982	0.2187	2.7680	3.4216	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	$4.704 \times 10^1$	7.905				7.905	$6.991 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	6.166				6.166	$1.278 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.815				4.815	$2.392 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.735				3.735	$4.783 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.189				3.189	$7.699 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.394				2.394	$2.264 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.251				2.252	$3.127 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.096				2.097	$4.977 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.007				2.007	$7.913 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.973			0.000	1.973	$1.295 \times 10^2$	
318. MeV	$4.105 \times 10^2$	1.973			0.000	1.973	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	1.979			0.000	1.979	$1.802 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.054	0.000		0.000	2.054	$3.786 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.088	0.000		0.000	2.088	$4.751 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.143	0.000		0.001	2.144	$6.641 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.204	0.001	0.000	0.001	2.206	$9.397 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.273	0.001	0.001	0.001	2.277	$1.386 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.322	0.001	0.001	0.002	2.326	$1.820 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.432	0.004	0.003	0.004	2.443	$3.493 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.466	0.005	0.005	0.005	2.480	$4.305 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.515	0.007	0.008	0.007	2.536	$5.899 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.564	0.011	0.013	0.009	2.597	$8.235 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.617	0.018	0.022	0.013	2.671	$1.203 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.653	0.026	0.033	0.018	2.729	$1.573 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.736	0.059	0.079	0.034	2.908	$2.990 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.762	0.076	0.104	0.042	2.985	$3.669 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.800	0.113	0.157	0.059	3.129	$4.978 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.841	0.170	0.240	0.084	3.334	$6.835 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.886	0.268	0.381	0.125	3.661	$9.695 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.919	0.369	0.528	0.167	3.984	$1.231 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.998	0.793	1.141	0.337	5.269	$2.102 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.023	1.012	1.458	0.424	5.917	$2.460 \times 10^5$	
1.04 TeV	$1.044 \times 10^6$	3.028	1.059	1.526	0.443	6.056	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	3.062	1.453	2.088	0.601	7.204	$3.071 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	3.104	2.131	3.054	0.870	9.159	$3.808 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	3.152	3.267	4.661	1.334	12.414	$4.743 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.187	4.423	6.292	1.805	15.706	$5.457 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.272	9.104	12.858	3.767	29.002	$7.303 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.300	11.471	16.165	4.778	35.715	$7.924 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.343	16.197	22.754	6.861	49.155	$8.875 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.389	23.345	32.692	10.062	69.488	$9.896 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.443	35.247	49.229	15.617	103.536	$1.107 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.481	47.214	65.819	21.319	137.834	$1.190 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.576	95.214	132.233	45.251	276.274	$1.391 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.607	119.283	165.479	57.657	346.027	$1.456 \times 10^6$	