

## Muons in octane (C<sub>8</sub>H<sub>18</sub>)

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.57778	0.703	54.7	0.11387	3.4776	0.1882	2.5664	3.1834	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
				[MeV cm <sup>2</sup> /g]					
10.0 MeV	$4.704 \times 10^1$	8.629				8.629			$6.387 \times 10^{-1}$
14.0 MeV	$5.616 \times 10^1$	6.721				6.721			$1.170 \times 10^0$
20.0 MeV	$6.802 \times 10^1$	5.242				5.242			$2.192 \times 10^0$
30.0 MeV	$8.509 \times 10^1$	4.060				4.060			$4.390 \times 10^0$
40.0 MeV	$1.003 \times 10^2$	3.464				3.464			$7.074 \times 10^0$
80.0 MeV	$1.527 \times 10^2$	2.595				2.595			$2.084 \times 10^1$
100. MeV	$1.764 \times 10^2$	2.433				2.433			$2.882 \times 10^1$
140. MeV	$2.218 \times 10^2$	2.263				2.264			$4.595 \times 10^1$
200. MeV	$2.868 \times 10^2$	2.165				2.165			$7.316 \times 10^1$
300. MeV	$3.917 \times 10^2$	2.124			0.000	2.125			$1.199 \times 10^2$
328. MeV	$4.211 \times 10^2$	2.123			0.000	2.124			<i>Minimum ionization</i>
400. MeV	$4.945 \times 10^2$	2.129			0.000	2.129			$1.670 \times 10^2$
800. MeV	$8.995 \times 10^2$	2.203	0.000		0.000	2.203			$3.518 \times 10^2$
1.00 GeV	$1.101 \times 10^3$	2.237	0.000		0.000	2.238			$4.418 \times 10^2$
1.40 GeV	$1.502 \times 10^3$	2.293	0.000		0.001	2.295			$6.183 \times 10^2$
2.00 GeV	$2.103 \times 10^3$	2.356	0.000	0.000	0.001	2.357			$8.760 \times 10^2$
3.00 GeV	$3.104 \times 10^3$	2.427	0.001	0.000	0.001	2.430			$1.293 \times 10^3$
4.00 GeV	$4.104 \times 10^3$	2.476	0.001	0.001	0.002	2.480			$1.701 \times 10^3$
8.00 GeV	$8.105 \times 10^3$	2.590	0.003	0.003	0.004	2.599			$3.271 \times 10^3$
10.0 GeV	$1.011 \times 10^4$	2.625	0.004	0.004	0.005	2.637			$4.035 \times 10^3$
14.0 GeV	$1.411 \times 10^4$	2.675	0.006	0.006	0.007	2.693			$5.535 \times 10^3$
20.0 GeV	$2.011 \times 10^4$	2.726	0.009	0.010	0.009	2.754			$7.736 \times 10^3$
30.0 GeV	$3.011 \times 10^4$	2.781	0.014	0.018	0.014	2.827			$1.132 \times 10^4$
40.0 GeV	$4.011 \times 10^4$	2.819	0.020	0.026	0.018	2.884			$1.482 \times 10^4$
80.0 GeV	$8.011 \times 10^4$	2.906	0.047	0.063	0.035	3.051			$2.828 \times 10^4$
100. GeV	$1.001 \times 10^5$	2.934	0.061	0.083	0.043	3.121			$3.476 \times 10^4$
140. GeV	$1.401 \times 10^5$	2.974	0.090	0.125	0.060	3.249			$4.732 \times 10^4$
200. GeV	$2.001 \times 10^5$	3.016	0.136	0.192	0.085	3.429			$6.528 \times 10^4$
300. GeV	$3.001 \times 10^5$	3.064	0.215	0.305	0.127	3.712			$9.330 \times 10^4$
400. GeV	$4.001 \times 10^5$	3.098	0.297	0.424	0.170	3.989			$1.193 \times 10^5$
800. GeV	$8.001 \times 10^5$	3.181	0.640	0.919	0.343	5.083			$2.079 \times 10^5$
1.00 TeV	$1.000 \times 10^6$	3.208	0.817	1.176	0.431	5.632			$2.452 \times 10^5$
1.31 TeV	$1.312 \times 10^6$	3.241	1.096	1.573	0.572	6.482			<i>Muon critical energy</i>
1.40 TeV	$1.400 \times 10^6$	3.249	1.175	1.686	0.611	6.722			$3.102 \times 10^5$
2.00 TeV	$2.000 \times 10^6$	3.293	1.726	2.470	0.886	8.375			$3.900 \times 10^5$
3.00 TeV	$3.000 \times 10^6$	3.344	2.651	3.776	1.357	11.127			$4.932 \times 10^5$
4.00 TeV	$4.000 \times 10^6$	3.380	3.592	5.101	1.837	13.911			$5.735 \times 10^5$
8.00 TeV	$8.000 \times 10^6$	3.470	7.411	10.441	3.837	25.159			$7.843 \times 10^5$
10.0 TeV	$1.000 \times 10^7$	3.499	9.345	13.131	4.868	30.843			$8.560 \times 10^5$
14.0 TeV	$1.400 \times 10^7$	3.544	13.205	18.491	6.993	42.233			$9.664 \times 10^5$
20.0 TeV	$2.000 \times 10^7$	3.592	19.049	26.577	10.260	59.479			$1.086 \times 10^6$
30.0 TeV	$3.000 \times 10^7$	3.648	28.782	40.029	15.935	88.395			$1.223 \times 10^6$
40.0 TeV	$4.000 \times 10^7$	3.689	38.574	53.527	21.761	117.551			$1.320 \times 10^6$
80.0 TeV	$8.000 \times 10^7$	3.789	77.834	107.565	46.240	235.427			$1.556 \times 10^6$
100. TeV	$1.000 \times 10^8$	3.821	97.517	134.617	58.939	294.895			$1.632 \times 10^6$