

## Muons in amber ( $C_{10}H_{16}O$ )

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.55179	1.100	63.2	0.11934	3.4098	0.1335	2.5610	3.0701	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
10.0 MeV	$4.704 \times 10^1$	8.093				8.093	$6.818 \times 10^{-1}$		
14.0 MeV	$5.616 \times 10^1$	6.308				6.308	$1.248 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	4.922				4.922	$2.337 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	3.816				3.816	$4.677 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	3.256				3.256	$7.532 \times 10^0$		
80.0 MeV	$1.527 \times 10^2$	2.438				2.438	$2.217 \times 10^1$		
100. MeV	$1.764 \times 10^2$	2.282				2.282	$3.068 \times 10^1$		
140. MeV	$2.218 \times 10^2$	2.123				2.123	$4.893 \times 10^1$		
200. MeV	$2.868 \times 10^2$	2.030				2.031	$7.794 \times 10^1$		
300. MeV	$3.917 \times 10^2$	1.993			0.000	1.994	$1.278 \times 10^2$		
324. MeV	$4.161 \times 10^2$	1.993			0.000	1.993	<i>Minimum ionization</i>		
400. MeV	$4.945 \times 10^2$	1.998			0.000	1.998	$1.779 \times 10^2$		
800. MeV	$8.995 \times 10^2$	2.069	0.000		0.000	2.069	$3.748 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	2.102	0.000		0.000	2.103	$4.706 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	2.156	0.000		0.001	2.157	$6.583 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	2.215	0.000	0.000	0.001	2.217	$9.325 \times 10^2$		
3.00 GeV	$3.104 \times 10^3$	2.283	0.001	0.001	0.001	2.286	$1.376 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	2.331	0.001	0.001	0.002	2.335	$1.809 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	2.439	0.003	0.003	0.004	2.449	$3.477 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	2.472	0.004	0.004	0.005	2.485	$4.287 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	2.521	0.006	0.006	0.007	2.540	$5.878 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	2.569	0.009	0.011	0.009	2.599	$8.212 \times 10^3$		
30.0 GeV	$3.011 \times 10^4$	2.622	0.015	0.019	0.014	2.670	$1.201 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	2.658	0.022	0.027	0.018	2.725	$1.571 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	2.742	0.049	0.066	0.035	2.892	$2.993 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.768	0.064	0.088	0.043	2.963	$3.676 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.806	0.095	0.132	0.060	3.093	$4.997 \times 10^4$		
200. GeV	$2.001 \times 10^5$	2.847	0.143	0.202	0.084	3.277	$6.881 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.892	0.226	0.322	0.127	3.567	$9.805 \times 10^4$		
400. GeV	$4.001 \times 10^5$	2.925	0.313	0.447	0.169	3.853	$1.250 \times 10^5$		
800. GeV	$8.001 \times 10^5$	3.004	0.673	0.967	0.341	4.985	$2.160 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	3.030	0.859	1.237	0.428	5.554	$2.540 \times 10^5$		
1.19 TeV	$1.194 \times 10^6$	3.050	1.040	1.496	0.515	6.101	<i>Muon critical energy</i>		
1.40 TeV	$1.400 \times 10^6$	3.069	1.234	1.773	0.607	6.684	$3.196 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	3.111	1.811	2.596	0.879	8.398	$3.995 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	3.159	2.780	3.966	1.348	11.253	$5.020 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	3.194	3.766	5.357	1.824	14.141	$5.812 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	3.279	7.761	10.958	3.809	25.809	$7.875 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	3.308	9.783	13.780	4.832	31.704	$8.573 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	3.351	13.819	19.403	6.940	43.513	$9.646 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	3.397	19.927	27.884	10.181	61.389	$1.080 \times 10^6$		
30.0 TeV	$3.000 \times 10^7$	3.450	30.098	41.995	15.807	91.351	$1.213 \times 10^6$		
40.0 TeV	$4.000 \times 10^7$	3.489	40.328	56.153	21.584	121.554	$1.307 \times 10^6$		
80.0 TeV	$8.000 \times 10^7$	3.584	81.338	112.834	45.842	243.598	$1.535 \times 10^6$		
100. TeV	$1.000 \times 10^8$	3.615	101.896	141.209	58.422	305.142	$1.609 \times 10^6$		