

Muons in cellulose nitrate [(C₁₂H₁₄O₄(ONO₂)₆)_n]

$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
0.51424	1.490	87.0	0.11813	3.3237	0.1897	2.7253	3.4762	0.00
T	p [MeV/c]	Ionization	Brems	Pair prod [MeV cm ² /g]	Photonucl	Total	CSDA range [g/cm ²]	
10.0 MeV	4.704×10^1	7.237				7.237	7.647×10^{-1}	
14.0 MeV	5.616×10^1	5.649				5.649	1.397×10^0	
20.0 MeV	6.802×10^1	4.415				4.415	2.612×10^0	
30.0 MeV	8.509×10^1	3.428				3.428	5.219×10^0	
40.0 MeV	1.003×10^2	2.928				2.928	8.396×10^0	
80.0 MeV	1.527×10^2	2.201				2.201	2.465×10^1	
100. MeV	1.764×10^2	2.066				2.067	3.405×10^1	
140. MeV	2.218×10^2	1.926				1.926	5.420×10^1	
200. MeV	2.868×10^2	1.845				1.845	8.615×10^1	
300. MeV	3.917×10^2	1.815			0.000	1.816	1.410×10^2	
314. MeV	4.065×10^2	1.815			0.000	1.815		<i>Minimum ionization</i>
400. MeV	4.945×10^2	1.822			0.000	1.822	1.960×10^2	
800. MeV	8.995×10^2	1.894	0.000		0.000	1.894	4.113×10^2	
1.00 GeV	1.101×10^3	1.926	0.000		0.000	1.927	5.160×10^2	
1.40 GeV	1.502×10^3	1.979	0.000		0.001	1.980	7.206×10^2	
2.00 GeV	2.103×10^3	2.037	0.001	0.000	0.001	2.038	1.019×10^3	
3.00 GeV	3.104×10^3	2.102	0.001	0.001	0.001	2.105	1.501×10^3	
4.00 GeV	4.104×10^3	2.148	0.001	0.001	0.002	2.152	1.971×10^3	
8.00 GeV	8.105×10^3	2.252	0.004	0.003	0.004	2.263	3.777×10^3	
10.0 GeV	1.011×10^4	2.284	0.005	0.005	0.005	2.298	4.654×10^3	
14.0 GeV	1.411×10^4	2.329	0.007	0.008	0.007	2.351	6.374×10^3	
20.0 GeV	2.011×10^4	2.376	0.011	0.013	0.009	2.409	8.894×10^3	
30.0 GeV	3.011×10^4	2.425	0.018	0.022	0.013	2.479	1.298×10^4	
40.0 GeV	4.011×10^4	2.459	0.026	0.033	0.018	2.535	1.697×10^4	
80.0 GeV	8.011×10^4	2.537	0.059	0.079	0.034	2.709	3.221×10^4	
100. GeV	1.001×10^5	2.561	0.076	0.104	0.042	2.784	3.949×10^4	
140. GeV	1.401×10^5	2.597	0.112	0.156	0.059	2.924	5.351×10^4	
200. GeV	2.001×10^5	2.635	0.169	0.239	0.083	3.126	7.334×10^4	
300. GeV	3.001×10^5	2.677	0.267	0.380	0.125	3.449	1.038×10^5	
400. GeV	4.001×10^5	2.708	0.368	0.527	0.166	3.769	1.315×10^5	
800. GeV	8.001×10^5	2.781	0.790	1.137	0.335	5.044	2.229×10^5	
974. GeV	9.745×10^5	2.802	0.979	1.412	0.410	5.605		<i>Muon critical energy</i>
1.00 TeV	1.000×10^6	2.805	1.008	1.453	0.421	5.687	2.603×10^5	
1.40 TeV	1.400×10^6	2.841	1.446	2.081	0.598	6.966	3.237×10^5	
2.00 TeV	2.000×10^6	2.881	2.120	3.043	0.865	8.909	3.997×10^5	
3.00 TeV	3.000×10^6	2.926	3.249	4.644	1.326	12.145	4.955×10^5	
4.00 TeV	4.000×10^6	2.958	4.397	6.267	1.794	15.417	5.684×10^5	
8.00 TeV	8.000×10^6	3.038	9.045	12.806	3.745	28.634	7.559×10^5	
10.0 TeV	1.000×10^7	3.064	11.395	16.099	4.750	35.308	8.186×10^5	
14.0 TeV	1.400×10^7	3.104	16.084	22.660	6.819	48.668	9.148×10^5	
20.0 TeV	2.000×10^7	3.147	23.176	32.556	9.998	68.878	1.018×10^6	
30.0 TeV	3.000×10^7	3.197	34.984	49.023	15.515	102.720	1.136×10^6	
40.0 TeV	4.000×10^7	3.233	46.854	65.542	21.177	136.807	1.220×10^6	
80.0 TeV	8.000×10^7	3.322	94.446	131.677	44.931	274.376	1.423×10^6	
100. TeV	1.000×10^8	3.351	118.305	164.783	57.241	343.680	1.488×10^6	