

Muons in barium sulfate BaSO₄

	$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
	0.44561	4.500	285.7	0.11747	3.0427	-0.0128	3.4069	4.8923	0.00
T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm ²]		
				[MeV cm ² /g]					
10.0 MeV	4.704×10^1	5.288				5.288		1.061×10^0	
14.0 MeV	5.616×10^1	4.157				4.157		1.923×10^0	
20.0 MeV	6.802×10^1	3.270				3.271		3.569×10^0	
30.0 MeV	8.509×10^1	2.557				2.557		7.074×10^0	
40.0 MeV	1.003×10^2	2.194				2.194		1.132×10^1	
80.0 MeV	1.527×10^2	1.659				1.659		3.293×10^1	
100. MeV	1.764×10^2	1.563				1.563		4.538×10^1	
140. MeV	2.218×10^2	1.467				1.467		7.193×10^1	
200. MeV	2.868×10^2	1.417				1.417		1.137×10^2	
267. MeV	3.577×10^2	1.406			0.000	1.407		<i>Minimum ionization</i>	
300. MeV	3.917×10^2	1.408	0.000		0.000	1.408		1.847×10^2	
400. MeV	4.945×10^2	1.423	0.000		0.000	1.423		2.553×10^2	
800. MeV	8.995×10^2	1.503	0.001		0.000	1.504		5.285×10^2	
1.00 GeV	1.101×10^3	1.536	0.001		0.000	1.537		6.600×10^2	
1.40 GeV	1.502×10^3	1.589	0.001	0.000	0.001	1.591		9.155×10^2	
2.00 GeV	2.103×10^3	1.647	0.002	0.001	0.001	1.651		1.285×10^3	
3.00 GeV	3.104×10^3	1.713	0.004	0.002	0.001	1.720		1.878×10^3	
4.00 GeV	4.104×10^3	1.758	0.005	0.004	0.002	1.769		2.451×10^3	
8.00 GeV	8.105×10^3	1.861	0.013	0.012	0.003	1.890		4.630×10^3	
10.0 GeV	1.011×10^4	1.892	0.017	0.017	0.004	1.931		5.676×10^3	
14.0 GeV	1.411×10^4	1.937	0.026	0.028	0.006	1.997		7.711×10^3	
20.0 GeV	2.011×10^4	1.982	0.040	0.046	0.008	2.076		1.066×10^4	
30.0 GeV	3.011×10^4	2.029	0.066	0.080	0.012	2.187		1.534×10^4	
40.0 GeV	4.011×10^4	2.061	0.093	0.117	0.016	2.287		1.981×10^4	
80.0 GeV	8.011×10^4	2.131	0.211	0.282	0.031	2.655		3.601×10^4	
100. GeV	1.001×10^5	2.153	0.273	0.371	0.038	2.835		4.330×10^4	
140. GeV	1.401×10^5	2.184	0.401	0.554	0.053	3.192		5.659×10^4	
200. GeV	2.001×10^5	2.217	0.601	0.843	0.075	3.737		7.395×10^4	
285. GeV	2.847×10^5	2.249	0.890	1.253	0.107	4.500		<i>Muon critical energy</i>	
300. GeV	3.001×10^5	2.254	0.943	1.329	0.113	4.640		9.793×10^4	
400. GeV	4.001×10^5	2.280	1.297	1.832	0.150	5.561		1.176×10^5	
800. GeV	8.001×10^5	2.344	2.760	3.899	0.303	9.307		1.726×10^5	
1.00 TeV	1.000×10^6	2.365	3.511	4.957	0.381	11.216		1.922×10^5	
1.40 TeV	1.400×10^6	2.396	5.019	7.068	0.540	15.024		2.229×10^5	
2.00 TeV	2.000×10^6	2.430	7.326	10.291	0.781	20.829		2.567×10^5	
3.00 TeV	3.000×10^6	2.469	11.179	15.646	1.196	30.491		2.961×10^5	
4.00 TeV	4.000×10^6	2.497	15.085	21.061	1.616	40.261		3.246×10^5	
8.00 TeV	8.000×10^6	2.567	30.840	42.832	3.363	79.603		3.939×10^5	
10.0 TeV	1.000×10^7	2.589	38.782	53.777	4.261	99.411		4.163×10^5	
14.0 TeV	1.400×10^7	2.624	54.625	75.614	6.107	138.970		4.502×10^5	
20.0 TeV	2.000×10^7	2.661	78.535	108.513	8.938	198.648		4.861×10^5	
30.0 TeV	3.000×10^7	2.705	118.337	163.251	13.836	298.129		5.270×10^5	
40.0 TeV	4.000×10^7	2.736	158.287	218.124	18.854	398.002		5.559×10^5	
80.0 TeV	8.000×10^7	2.813	318.350	437.779	39.839	798.781		6.254×10^5	
100. TeV	1.000×10^8	2.838	398.526	547.713	50.689	999.767		6.478×10^5	