

**Table 254: Muons in Sodium nitrate  $\text{NaNO}_3$**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.49415	2.261	114.6	0.09391	3.5097	0.1534	2.8221	3.6502	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	$4.704 \times 10^1$	6.702				6.702	$8.281 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.239				5.239	$1.510 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.100				4.100	$2.820 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.187				3.187	$5.624 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.726				2.726	$9.039 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.053				2.053	$2.648 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.927				1.927	$3.656 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.800				1.800	$5.814 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.729				1.729	$9.228 \times 10^1$	
298. MeV	$3.894 \times 10^2$	1.705			0.000	1.705	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.705			0.000	1.705	$1.507 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.714			0.000	1.714	$2.092 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.787	0.000		0.000	1.787	$4.377 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.819	0.000		0.000	1.819	$5.486 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.870	0.000	0.000	0.001	1.871	$7.653 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.926	0.001	0.000	0.001	1.928	$1.081 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.990	0.001	0.001	0.001	1.993	$1.590 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.034	0.002	0.001	0.002	2.039	$2.086 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.135	0.004	0.004	0.004	2.147	$3.992 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.165	0.005	0.005	0.005	2.181	$4.916 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.209	0.008	0.009	0.006	2.233	$6.727 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.254	0.013	0.015	0.009	2.291	$9.378 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.302	0.021	0.026	0.013	2.362	$1.367 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.334	0.030	0.038	0.017	2.420	$1.785 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.409	0.068	0.091	0.034	2.602	$3.377 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.432	0.088	0.120	0.042	2.682	$4.134 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.467	0.130	0.181	0.058	2.835	$5.584 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.503	0.195	0.276	0.082	3.057	$7.621 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.544	0.307	0.438	0.123	3.413	$1.072 \times 10^5$	
400. GeV	$4.001 \times 10^5$	2.573	0.423	0.607	0.164	3.767	$1.350 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.644	0.907	1.307	0.331	5.190	$2.251 \times 10^5$	
830. GeV	$8.297 \times 10^5$	2.648	0.944	1.360	0.344	5.296	<i>Muon critical energy</i>	
1.00 TeV	$1.000 \times 10^6$	2.667	1.156	1.669	0.416	5.909	$2.612 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.702	1.659	2.388	0.590	7.339	$3.219 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.739	2.429	3.489	0.854	9.512	$3.935 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.783	3.720	5.322	1.309	13.133	$4.826 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.814	5.032	7.179	1.770	16.796	$5.498 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.891	10.340	14.655	3.693	31.580	$7.207 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.916	13.022	18.420	4.683	39.042	$7.775 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.954	18.375	25.922	6.722	53.974	$8.643 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.996	26.468	37.235	9.852	76.551	$9.572 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.044	39.936	56.061	15.282	114.324	$1.063 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.078	53.470	74.946	20.853	152.348	$1.139 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.163	107.742	150.547	44.210	305.663	$1.321 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.191	134.950	188.391	56.310	382.842	$1.379 \times 10^6$	