

Data Repository item 2003038

Table DR1. $^{87}\text{Sr}/^{86}\text{Sr}$ results for the Maastrichtian samples from Blake Nose

Sample ⁱ	Depth ⁱⁱ	$^{87}\text{Sr}/^{86}\text{Sr}$ ⁱⁱⁱ	Std Err (%)	Comments
1049C, 8X-5, 105-106 cm	113.15	0.707848	0.0006	data in MacLeod <i>et al.</i> , 2001
1049C, 8X-5, 135-137 cm	113.45	0.707851	0.0008	data in MacLeod <i>et al.</i> , 2001
1049C, 8X-6, 45-47 cm	114.05	0.707864	0.0006	data in MacLeod <i>et al.</i> , 2001
1049C, 8X-6, 125-127 cm	114.85	0.707849	0.0006	data in MacLeod <i>et al.</i> , 2001
1049C, 8X-7, 20-22 cm	115.30	0.707875	0.0007	data in MacLeod <i>et al.</i> , 2001
1049C, 9X-2, 50-52 cm	117.70	0.707855	0.0006	
1049C, 9X-CC	120.18	0.707839	0.0008	
1049C, 10H-2, 50-52 cm	122.20	0.707852	0.0007	
1049C, 10H-4, 50-52 cm	125.20	0.707824	0.0016	
1049C, 10H-4, 100-102 cm	125.70	0.707791	0.0006	
1049C, 10X-CC	129.70	0.707783	0.0007	
1049C, 11X-2, 113-115 cm	132.33	0.707760	0.0007	
1050C, 11R-1, 42.5-45 cm	409.13	0.707866	0.0007	
1050C, 13R-1, 65-67 cm	423.95	0.707840	0.0007	
1050C, 13R-5, 65-67 cm	429.95	0.707819	0.0007	
1050C, 15R-1, 82-84 cm	443.42	0.707825		average of replicates below
1050C, 15R-1, 82-84 cm	443.42	0.707820	0.0007	replicate, average plotted in Fig. 3
1050C, 15R-1, 82-84 cm	443.42	0.707831	0.0008	replicate, average plotted in Fig. 3
1050C, 15R-6, 35-37 cm	450.45	0.707793	0.0007	
1050C, 17R-1, 37-40 cm	462.17	0.707796		average of replicates below
1050C, 17R-1, 37-40 cm	462.17	0.707815	0.0008	replicate, average plotted in Fig. 3
1050C, 17R-1, 37-40 cm	462.17	0.707777	0.0006	replicate, average plotted in Fig. 3
1050C, 17R-2, 25-26 cm	463.55	0.707801	0.0008	
1050C, 17R-2, 27-28 cm	463.57	0.707791	0.0007	
1050C, 17R-2, 30-31 cm	463.60	0.707774	0.0008	
1050C, 17R-2, 33-34 cm	463.63	0.707778	0.0006	
1050C, 17R-2, 35-36 cm	463.65	0.707794	0.0008	
1050C, 18R-1, 0-1 cm	471.40	0.707765	0.0020	
1050C, 18R-1, 3-4 cm	471.43	0.707774	0.0006	
1050C, 18R-1, 5-6 cm	471.45	0.707759	0.0005	
1050C, 18R-1, 7-8 cm	471.47	0.707775	0.0008	
1050C, 18R-1, 10-11 cm	471.50	0.707764	0.0008	
1050C, 18R-1, 34-35 cm	471.74	0.707779	0.0007	
1050C, 18R-1, 37-38 cm	471.77	0.707786	0.0008	
1050C, 18R-1, 39-40 cm	471.79	0.707753	0.0007	
1050C, 18R-1, 42-43 cm	471.82	0.707769	0.0006	preferred value for this sample
1050C, 18R-1, 42-43 cm	471.82	0.707691	0.0007	value not used, see text
1050C, 18R-1, 44-45 cm	471.84	0.707772	0.0007	
1050C, 18R-3, 78-80 cm	475.18	0.707751	0.0005	
1052E, 20R-1, 74-77 cm	320.04	0.707825	0.0007	
1052E, 21R-2, 57-60 cm	330.97	0.707817	0.0008	
1052E, 23R-2, 36-39 cm	350.16	0.707821	0.0007	
1052E, 24R-1, 64-66 cm	358.54	0.707799	0.0007	
1052E, 25R-1, 45-48 cm	367.95	0.707794	0.0008	
1052E, 26R-2, 56-59 cm	379.16	0.707803	0.0006	
1052E, 27R-2, 1-2 cm	388.21	0.707800	0.0009	
1052E, 27R-2, 25-26 cm	388.45	0.707791	0.0008	
1052E, 27R-2, 27-28 cm	388.47	0.707786	0.0006	

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1052E, 27R-2, 30-31 cm	388.50	0.707810	0.0007	
1052E, 27R-2, 34-35 cm	388.54	0.707803	0.0008	
1052E, 27R-2, 36-37 cm	388.56	0.707796	0.0006	
1052E, 27R-2, 64-65 cm	388.84	0.707737	0.0007	slumped material
1052E, 27R-3, 137-138 cm	391.07	0.707756	0.0007	slumped material
1052E, 27R-4, 107-108 cm	392.27	0.707761	0.0007	
1052E, 27R-4, 111-112 cm	392.31	0.707781	0.0008	
1052E, 27R-4, 115-116 cm	392.35	0.707769	0.0006	
1052E, 27R-4, 118-119 cm	392.38	0.707762	0.0007	
1052E, 27R-4, 122-123 cm	392.42	0.707759	0.0007	
1052E, 29R-2, 13-17 cm	407.53	0.707760		average of replicates below
1052E, 29R-2, 13-17 cm	407.53	0.707754	0.0008	replicate, average plotted in Fig. 3
1052E, 29R-2, 13-17 cm	407.53	0.707761	0.0007	replicate, average plotted in Fig. 3
1052E, 29R-2, 13-17 cm	407.53	0.707766	0.0005	replicate, average plotted in Fig. 3
1052E, 31R-2, 9-13 cm	426.69	0.707771	0.0007	
1052E, 33R-1, 92-94 cm	445.22	0.707758	0.0008	
1052E, 35R-4, 17-20 cm	468.27	0.707735	0.0006	

ⁱSamples are grouped by locality arranged stratigraphically.

ⁱⁱDepth in meters below seafloor

ⁱⁱⁱ $^{87}\text{Sr}/^{86}\text{Sr}$ ratios are normalized to a $^{86}\text{Sr}/^{88}\text{Sr}$ ratio of 0.1194. Four or five NIST 987 SrCO_3 standards were analyzed for $^{87}\text{Sr}/^{86}\text{Sr}$ with each turret of samples; 0.710250 was accepted as the correct $^{87}\text{Sr}/^{86}\text{Sr}$ ratio for this standard, and the $^{87}\text{Sr}/^{86}\text{Sr}$ value reported for each sample was adjusted by the difference between the average for the analyses of NIST 987 in that turret and 0.70250. Analytical error based on twice standard deviation of results for NIST 987 run during this study (average = 0.710248, n = 22) is ± 0.000015 .

Datum		Cretaceous/Tertiary boundary (65.0 Ma)		boundary between Chron 30 and 31 (67.74 Ma)		base of <i>A. mayaroensis</i> Zone (68.25 Ma)	
		high	low	mid	high	low	mid
Depth in Core (mbsf)	1049C	high	113.15			125.08	
		low	113.15			125.56	
		mid	113.15			125.32	
	1050C	high	405.93			451.51	
		low	405.93			451.82	
		mid	405.93			451.67	
	1052E	high			324.60		368.85
		low			326.00		377.10
		mid			325.30		372.98

average sedimentation rate calculated from values in bold

interval

1049C above 125.65 mbsf
 1049C below 125.65 mbsf
 1050C above 463.72 mbsf
 1050C below 471.40 mbsf
 1052E above 388.58 mbsf
 1052E below 292.20 mbsf

age model

age (Ma) = 0.27 x depth + 34.78
 age (Ma) = 0.27 x depth + 34.78 + 1.5
 age (Ma) = 0.071 x depth + 36.06
 age (Ma) = (0.071 x depth) - (0.071 x thickness)
 age (Ma) = 0.019 x depth + 61.00
 age (Ma) = (0.019 x depth) - (0.019 x thickness)