APPENDIX II. CARBON AND CARBONATE ANALYSES, LEG 17

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Leg 17 sediments were analyzed for total carbon and acid-insoluble (organic) carbon using a LECO 70 Second Analyzer. The 3-cc sediment samples were first dried at 105° to 110°C and then ground to a homogeneous powder. The ground sediment was redried and two samples, a 0.1-g and a 0.5-g sample, were then weighed into LECO clay crucibles. The 0.5-g sample was acidified with dilute hydrochloric acid and washed with distilled water. The sample was then dried and analyzed for acid-insoluble carbon which is labeled in the table as "organic" carbon. The 0.1-g sample was analyzed for total carbon without further treatment. If the result showed less than 10% CaCO₃, an additional 0.5-g sample was analyzed for greater accuracy. The calcium carbonate percentages were calculated as follows: (% total C—% organic C) × 8.33 = % CaCO₃. Although other carbonates may be present, all acid-soluble carbon was calculated as calcium carbonate. All results are given in weight percent (Table 1). Precisions for the analyses are as follows:

Total Carbon:

(1.2 to 12%): ±0.2% (absolute variation)

(0 to 1.2%): ±0.04% (absolute variation)

Organic Carbon: ±0.04% (absolute variation)

Calcium Carbonate:

(10 to 100%): ±2% (absolute variation)

(0 to 10%): ±0.6% (absolute variation)

Detailed descriptions of the technique and theory may be found in Bader, Gerard, et al. (1970) and Boyce and Bode (1972).

REFERENCES

- Bader, R. G., Gerard, R. D., et al., 1970. Initial Reports of the Deep Sea Drilling Project, Volume IV. Washington (U. S. Government Printing Office), 745 p.
- Boyce, R. E. and Bode, G. W., 1972. Carbon and carbonate analyses, Leg 9, Deep Sea Drilling Project: Initial Reports of the Deep Sea Drilling Project, Volume IX. Washington (U.S. Government Printing Office). p. 797.

TABLE 1
Carbon-Carbonate Analyses, Leg 17

Core, Section, Top of Interval (cm)	Hole Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
Site 164				
1-5, 50	34.5	0.1	0.1	0
2-2, 50	50.00	0.2	0.1	1
3-1, 50	51.50	0.1	0.1	0
3-5, 116	58.16	0.1	0.1	0
4-1, 91	57.91	0.0	0.0	0

TABLE 1 — Continued

Core, Section, Top of Interval (cm)	Hole Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
6-1, 50	75.50	0.1	0.1	1
7-1, 60	84.60	0.1	0.1	0
7-4, 50	89.00	0.1	0.1	0
7-5, 37	90.37	0.1	0.1	0
8-1, 55	93.55	0.1	0.1	0
8-2, 50	95.00	0.2	0.1	1
8-3, 50	96.50	0.2	0.1	1
8-4, 60	98.10	0.2	0.1	1
10-2, 50	114.00	0.2	0.1	1
10-3, 50	115.50	0.2	0.1	0
10-4, 50	117.00	0.2	0.1	1
11-1, 118	123.18	0.3	0.1	1
13-1, 83	137.83	0.2	0.1	1
25-1, 125	253.25	0.2	0.1	1
Site 165				
1-1, 50	0.50	0.3	0.1	1
1-1, 53	0.53	4.5	0.1	36
1-1, 56	0.56	6.6	0.1	54
1-1, 59	0.59	8.2	0.1	68
1-1, 62	0.62	9.3	0.1	77
1-1, 64	0.64	0.2	0.2	1
1-1, 106	1.06	10.6	0.1	88
1-2, 143	2.93	10.5	0.1	87
1-3, 25	3.25	10.2	0.1	84
2-2, 50	7.00	0.2	0.1	1
Site 165A				
1-2, 7	6.57	10.7	0.1	89
1-2, 36	6.86	9.7	0.1	80
1-2, 43	6.93	8.6	0.1	71
1-5, 116	12.16	10.5	0.1	87
2-1, 66	14.66	8.9	0.1	73
2-3, 12	17.12	4.5	0.1	37
2-3, 58	17.58	9.1	0.1	75
2-5, 87	20.87	9.3	0.0	77
2-5, 98	20.98	7.8	0.0	64
3-3, 52	27.52	10.3	0.0	86
3-3, 87	27.87	9.7	0.0	80
3-4, 30	28.80	10.5	0.0	87
3-4, 54	29.04	8.1	0.0	67
3-5, 50	30.50	9.7	0.0	80
3-5, 69	30.69	10.2	0.0	85
5-2, 138	82.88	10.1	0.0	84
5-3, 31	83.31	9.1	0.0	76
5-4, 139	85.89	8.6	0.0	71
6-1, 50	127.50	9.4	0.0	78
6-2, 50	129.00	10.0	0.0	83
6-3, 50	130.50	9.9	0.0	82
6-4, 50	132.00	9.5	0.0	78

TABLE 1 – Continued

Core, Section, Top of Interval (cm)	Hole Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
6-5, 50	133.50	9.7	0.0	80
6-6, 80	135.30	8.5	0.0	71
7-1, 50	136.50	10.0	0.0	83
7-2, 50	138.00	10.5	0.0	87
7-6, 140	144.90	5.8	0.0	48
8-1, 10	145.10	0.1	0.0	1
8-1, 18	145.18	4.8	0.0	40
8-1, 38	145.38	9.9	0.0	83
8-1, 61	145.61	9.8	0.0	81
8-1, 80	145.80	8.5	0.0	71
8-1, 101	146.01	6.8	0.0	56
8-3, 16	148.16	3.7	0.0	31
9-1, 50	154.50	3.3	0.0	27
9-1, 100	155.00	5.5	0.0	46
9-2, 34	155.84	8.4	0.0	70
9-2, 110	156.60	5.9	0.0	50
9-3, 30	157.30	5.0	0.0	41
9-3, 85	157.85	1.7	0.0	14
9-3, 130	158.30	1.0	0.0	8
9-4, 40	158.90	1.8	0.0	15
9-4, 107	159.57	4.5	0.0	38
9-5, 34	160.34	4.4	0.0	37
9-5, 89	160.89	2.7	0.0	22
9-6, 101	162.51	3.1	0.0	26
9-6, 139	162.89	6.0	0.0	50
9-6, 142.5	162.93	4.5	0.0	37
10-1, 74	201.74	8.7	0.0	72
10-2, 130	202.30	7.6	0.0	63
10-2, 40	202.90	7.2	0.0	60
10-2, 130	203.80	7.4	0.0	62
10-3, 40	204.40	6.4	0.0	53
10-3, 125	205.25	6.8	0.0	57
10-4, 40	205.90	6.7	0.0	55
10-4, 110	206.60	6.9	0.0	57
10-5, 40	207.40	7.0	0.0	58
10-5, 110	208.10	6.8	0.0	57
10-6, 40	208.90	7.2	0.0	60
10-6, 120	209.70	6.9	0.0	58
11-1, 64	210.64	5.5	0.0	45
11-1, 140	211.40	5.6	0.0	47
11-2, 50	212.00	1.6	0.0	13
11-2, 110	212.60	4.5	0.0	38
11-3, 40	213.40	6.3	0.0	52
11-3, 120	214.20	8.7	0.0	72
11-4, 30	214.80	7.2	0.0	60
11-4, 100	215.50	8.7	0.0	72
11-5, 40	216.40	8.8	0.0	73
11-5, 120	217.20	8.9	0.0	74
12-1, 33	219.33	7.9	0.0	66
12-1, 110	220.10	6.3	0.0	53
12-2, 68	221.18	3.8	0.0	32
12-2, 99	221.49	0.9	0.0	8
12-3, 54	222.54	0.1	0.0	0
12-3, 110	223.10	7.7	0.0	64
12-4, 42.	223.92	0.4	0.0	3
12-4, 60	224.10	0.4	0.0	4
12-4, 82	224.32	1.7	0.0	14
12-5, 17	225.17	6.2	0.0	52
12-5, 42	225.42	1.7	0.0	14
12-5, 103	226.03	2.5	0.0	21
13-1, 86	228.86	7.5	0.0	62
13-1, 98	228.98	0.0	0.0	0
13-1, 126	229.26	2.9	0.0	24

TABLE 1 – Continued

Core, Section Top of Interval (cm)	Depth in Hole (m)	Carbon Total (%)	Organic Carbon (%)	CaCO ₃ (%)
13-2, 24	229.74	7.4	0.0	61
13-2, 96	230.46	0.0	0.0	0
13-5, 50	234.50	0.0	0.0	0
18-1, 82	290.82	2.6	0.0	22
18-2, 103	292.53	0.3	0.1	2
18-3, 50	293.50	1.5	0.0	12
19-1, 86	321.86	0.2	0.0	1
19-1, 94	321.94	8.1	0.0	68
19-2, 113	323.63	1.6	0.0	13
20-3, 140	344.40	6.8	0.0	57
21-2, 51	370.01	7.3	0.0	60
21-3, 33	371.33	7.5	0.0	62
22-3, 6	399.06	1.5	0.1	12
Site 166				
2-1, 50	1.50	0.1	0.1	0
2-2, 50	3.00	0.3	0.1	2
2-3, 50	4.50	0.1	0.1	1
2-4, 50	6.00	0.2	0.0	1
2-5, 12	7.12	0.2	0.1	1
2-6, 50	9.00	0.2	0.1	1
3-3, 50	14.50	0.2	0.1	1
4-1, 50	20.50	0.5	0.0	4
4-2, 50	22.00	0.4	0.0	3
4-3, 50	23.50	0.7	0.0	6
4-4, 50	25.00	0.4	0.1	3
4-5, 50	26.50	1.8	0.0	15
4-6, 50	28.00	2.6	0.0	21
5-1, 80	29.80	2.4	0.0	20
5-2, 60	31.10	3.1	0.0	26
5-3, 50	32.50	3.2	0.0	27
5-4, 50	34.00	0.9	0.1	7
5-5, 50	35.50	2.1	0.1	17
7-1, 50	65.50	0.8	0.1	6
7-2, 50	67.00	0.7	0.1	5
7-3, 50	68.50	0.1	0.1	0
7-4, 50	70.00	1.9	0.1	15
7-5, 50	71.50	2.8	0.0	23
7-6, 50	73.00	1.4	0.1	11
8-1, 50	84.50	0.6	0.1	5
8-2, 20	85.70	0.6	0.1	4
8-3, 50	87.50	0.1	0.1	0
8-4, 50	89.00	0.1	0.0	0
8-5, 59	90.59	0.0	0.0	0
9-1, 107	104.07	0.1	0.1	0
9-2, 50	105.00	0.1	0.1	0
9-3, 45	106.45	0.1	0.1	0
9-4, 48	107.98	0.0	0.0	0
9-5, 50	109.50	0.1	0.0	0
9-6, 17	110.67	0.9	0.1	7
10-2, 50	123.00	0.0	0.0	0
10-3, 50	124.50	0.6	0.1	5
10-4, 50	126.00	0.4	0.1	3
10-5, 50	127.50	2.5	0.1	20
12-1, 31	159.31	0.0	0.0	0
12-1, 134	160.34	0.0	0.0	0
12-2, 50	161.00	0.0	0.0	0
12-3, 50	162.50	0.3	0.1	2
12-4, 50	164.00	0.0	0.0	0

TABLE 1 – Continued

Core, Section, Top of Interval (cm)	Hole Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
12-5, 50	165.50	0.0	0.0	0
12-6, 50	167.00	0.0	0.0	0
13-1, 50	169.50	0.1	0.0	0
13-2, 50	171.00	0.1	0.0	0
13-3, 50	172.50	0.0	0.0	0
13-4, 50	174.00	0.0	0.0	0
13-5, 72	175.72	0.0	0.0	0
13-6, 35	176.85	0.0	0.0	0
16-2, 50	191.00	0.1	0.0	1
16-3, 50	192.50	0.1	0.0	0
16-4, 50	194.00	0.0	0.0	0
23-2, 32	251.82	0.0	0.0	0
23-2, 89	252.39	0.0	0.0	0
23-2, 134	252.84	0.0	0.0	0
23-2, 137	252.87	0.0	0.0	0
24-3, 102	264.02	0.6	0.0	5
24-5, 109	267.09	2.2	0.0	18
25-1, 88	270.88	0.0	0.0	0
25-1, 122	271.22	0.0	0.0	0
27-2, 38	290.88	4.8	0.0	40
Site 166A				
1-1, 2	0.02	7.8	0.1	64
1-1, 60	0.60	0.1	0.0	1
1-2, 50	2.00	0.1	0.0	1
1-3, 75	3.75	0.1	0.0	0
1-3, 108	4.08	11.3	0.0	94
1-4, 50	5.00	0.1	0.0	1
Site 167				
2-2, 50	11.00	11.3	0.0	94
2-5, 61	15.61	11.0	0.0	92
2-5, 101	16.01	11.4	0.0	95
3-1, 50	18.50	11.3	0.0	94
4-6, 50	74.00	11.2	0.0	93
7-2, 50	151.00	11.2	0.0	93
7-5, 100	156.00	11.3	0.0	94
7-5, 143	156.43	10.9	0.0	91
8-1, 133	187.33	11.4	0.0	94
9-1, 50	223.50	11.2	0.0	93
9-2, 50	225.00	11.4	0.0	95
9-4, 74	228.24	11.4	0.0	95
9-6, 50	231.00	11.6	0.0	96
10-2, 120	262.70	11.3	0.0	94
10-4, 55	265.05	11.2	0.0	94
10-6, 50	268.00	11.4	0.0	94
11-1, 49	297.49	11.2	0.0	93
11-4, 50	302.00	11.1	0.0	92
11-5, 50	303.50	11.1	0.0	92
12-2, 51	336.01	11.4	0.0	95
12-6, 50	342.00	11.4	0.0	95
13-3, 41	373.41	11.3	0.0	94
14-4, 37	411.87	11.1	0.0	92
18-2, 60	474.10	11.4	0.0	94
19-2, 50	483.00	11.2	0.0	93

TABLE 1 – Continued

Core, Section, Top of Interval (cm)	Hole Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
23-5, 109	526.09	11.1	0.0	92
57-1, 48	823.48	10.5	0.0	87
58-1, 120	828.20	2.9	0.0	24
58-2, 140	829.90	2.5	0.0	20
58-3, 131	831.31	2.3	0.1	19
58-4, 64	832.14	8.9	0.0	74
59-1, 31	832.31	8.4	0.0	69
59-2, 42	833.92	2.5	0.0	20
59-3, 63	835.63	8.6	0.0	71
60-2, 71	843.21	10.8	0.0	89
60-2, 98	843.48	0.2	0.1	0
60-2, 114	843.64	0.0	0.0	0
60-2, 128	843.78	0.0	0.0	0
62-2, 36	861.86	9.5	0.0	79
62-2, 67	862.17	10.2	0.0	85
62-2, 127	862.77	9.2	0.0	76
62-3, 75	863.75	4.2	0.0	35
62-3, 119	864.19	9.1	0.0	76
62-4, 40	864.90	10.0	0.0	83
63-1, 43	870.43	8.8	0.0	74
63-3, 46	873.46	9.0	0.0	74
63-3, 85	873.85	10.3	0.1	86
63-4, 102	875.52	11.0	0.0	92
64-1, 136	880.36	10.4	0.0	87
64-2, 111	881.61	11.3	0.0	94
64-5, 16	885.16	7.9	0.0	66
64-5, 135	886.34	9.6	0.1	79
65-1, 49	888.49	10.7	0.0	89
65-2, 118	890.68	9.9	0.0	82
65-3, 93	891.93	7.5	0.1	62
67-1, 122	908.22	9.3	0.1	77
67-3, 101	911.01	7.6	0.0	63
68-2, 19	917.69	7.7	0.0	64
68-2, 69	918.19	7.0	0.0	58
68-2, 140	918.90	8.8	0.0	73
68-2, 142	918.92	7.5	0.0	62
68-2, 144	918.94	10.1	0.0	83
68-3, 14	919.14	2.9	0.0	24
68-3, 16	919.16	4.6	0.0	38
68-5, 60	922.60	3.9	0.0	32
69-3, 34	928.34	5.2	0.0	43
69-4, 101	930.51	8.6	0.1	72
69-4, 147	930.97	7.8	0.1	65
70-1, 79	935.79	7.9	0.0	66
70-1, 104	936.04	10.6	0.0	88
70-1, 122	936.22	4.0	0.1	33
70-2, 40	936.90	3.7	0.0	31
70-2, 53	937.03	11.1	0.0	92
70-2, 102	937.52	7.5	0.1	62
70-4, 1	939.51	10.9	0.0	90
70-4, 3	939.53	11.4	0.0	94
71-2, 98	946.48	11.4	0.0	95
72-2, 0	954.50	4.8	0.0	40
73-1, 145	963.45	11.3	0.0	94
73-2, 30	963.80	10.7	0.0	89
73-2, 33	963.83	7.3	0.0	61
73-2, 36	963.86	5.7	0.0	47
73-2, 81	964.31	11.4	0.0	94
74-1, 137	972.37	10.8	0.0	89

TABLE 1 – Continued

Core, Section, Top of Interval (cm)	Hole Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
75-1, 106	982.06	11.2	0.0	93
76-1, 67	990.67	11.0	0.0	92
76-2, 100	992.50	10.9	0.0	90
77-1, 115	1000.15	10.8	0.0	90
88-1, 115	1109.15	9.8	0.0	81
92-1, 148	1149.48	11.4	0.0	95
93-1, 80	1157.80	11.2	0.0	93
93-2, 70	1159.20	10.9	0.1	90
94-2, 29	1167.79	6.7	0.1	55
94-2, 33	1167.83	8.1	0.1	66
Site 169				
7-1, 41	192.41	0.0	0.0	0
7-1, 147	193.47	4.9	0.0	41
Site 170				
2-2, 50	3.00	0.0	0.0	0
2-4, 50	6.00	0.0	0.0	0
6-4, 97	106.47	0.0	0.0	0
6-4, 126	106.76	7.9	0.0	65
6-4, 140	106.90	10.0	0.0	83
6-5, 100	108.00	1.5	0.0	12
6-6, 86	109.36	8.8	0.0	73
6-6, 117	109.67	5.4	0.0	45
6-6, 119	109.69	0.2	0.0	1
7-2, 50	112.00	9.2	0.0	77
7-3, 10	113.10	8.3	0.0	69
7-3, 30	113.30	0.0	0.0	0
7-3, 107	114.07	8.5	0.0	71
8-1, 25	120.25	8.1	0.0	68
8-1, 59	120.59	0.1	0.0	1
15-1, 123	185.23	0.9	0.0	7
15-2, 110	186.60	0.0	0.0	0
15-2, 138	186.88	8.6	0.0	71
Site 171				
1-2, 20	1.70	10.9	0.0	91
1-4, 30	4.80	11.2	0.0	93
1-6, 20	7.70	11.0	0.0	91
2-1, 40	22.40	10.5	0.0	88
2-2, 20	23.70	10.8	0.0	90
2-2, 90	24.40	11.0	0.0	92
2-3, 107	26.07	10.6	0.0	88
2-3, 116	26.16	10.5	0.0	88
2-4, 50	27.00	10.8	0.0	89
2-5, 50	28.50	11.0	0.0	91
3-1, 30	41.30	11.5	0.0	95
3-2, 20	42.70	11.4	0.0	95
3-3, 50	44.50	11.4	0.0	94
3-4, 20	45.70	10.5	0.0	87
3-6, 20	48.70	11.3	0.0	94

TABLE 1 – Continued

Core, Section, Top of Interval (cm)	Hole Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
4-1, 30	59.30	11.6	0.0	96
4-2, 50	61.00	11.6	0.0	97
4-3, 50	62.50	11.6	0.0	96
4-4, 50	64.00	11.7	0.0	97
4-5, 50	65.50	11.4	0.0	95
4-6, 50	67.00	11.5	0.0	96
5-1, 20	78.20	11.2	0.0	93
5-3, 20	81.20	11.6	0.0	96
5-4, 40	82.90	11.5	0.0	96
5-5, 20	84.20	11.6	0.0	96
6-2, 50	99.00	11.4	0.0	95
8-3, 30	127.30	11.5	0.0	95
8-5, 20	130.20	11.4	0.0	95
9-3, 50	146.50	8.1	0.1	67
9-5, 69	149.69	10.9	0.0	90
10-4, 30	156.80	10.1	0.1	84
11-4, 20	165.70	10.8	0.1	89
13-4, 20	194.70	10.2	0.0	85
15-2, 120	219.70	11.2	0.0	93
15-4, 20	221.70	8.0	0.0	67
15-6, 120	225.70	11.5	0.0	96
16-1, 33	226.33	11.2	0.0	93
16-4, 20	230.70	4.6	0.0	38
16-6, 20	233.70	10.7	0.0	89
17-3, 20	239.20	11.3	0.0	94
17-5, 28	242.28	11.2	0.0	93
19-1, 60	255.60	11.0	0.0	91
19-3, 53	258.53	11.2	0.0	93
19-5, 50	261.50	10.8	0.0	90
21-2, 32	274.82	9.0	0.0	75
22-1, 27	282.27	5.6	0.1	47
22-2, 120	284.70	6.8	0.0	56
22-3, 29	285.29	5.1	0.1	42
23-4, 130	297.80	5.8	0.1	47
23-5, 39	298.39	4.8	0.2	39
24-1, 52	301.52	2.9	0.3	22
25-2, 5	311.55	11.2	2.8	70
25-4, 89	315.39	8.5	0.2	69
25-5, 12	316.12	6.7	0.3	53
26-1, 36	320.36	2.5	0.1	20
26-2, 107	322.57	6.4	0.2	52
26-2, 147	322.97	6.8	0.3	54
26-3, 43	323.43	1.4	0.2	10
26-3, 61	323.61	1.0	0.1	8
26-3, 119	324.19	9.5	2.3	60
26-3, 139	324.39	3.4	0.2	27
28-2, 20	339.70	4.2	0.0	35
28-2, 73	340.23	3.0	0.0	24
28-2, 141	340.91	6.6	0.0	55
29-2, 60	349.10	11.9	0.0	99