

25. CARBON AND CARBONATE ANALYSES, LEG 30

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Leg 30 carbonate samples were collected onboard ship in 3-cc vials at the time the core was split open. On shore the samples were dried and ground to a homogeneous powder. The ground sediment was redried at 105°-110°C and two samples from each vial, a 0.1-g and a 0.5-g sample, were then weighed into LECO crucibles. The 0.5-g sample was acidified with dilute hydrochloric acid, washed with distilled water, redried, and analyzed for acid insoluble (organic) carbon using a LECO 70 carbon analyzer (Boyce and Bode, 1972). The 0.1-g sample was treated only with distilled water to cake the sample before analysis for total carbon. 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.

Detailed descriptions of technique and theory are in the Initial Reports of the Deep Sea Drilling Project, Volume 4 (Bader, Gerard, et al., 1970).

For control purposes a standard sediment was made up from Deep Sea Drilling material and analyzed for total carbon at predetermined intervals with the regular samples. Listed below is the statistical data for this standard.

DSDP Std.	No. of Samples	Total Carbon as % CaCO ₃	Standard Deviation	Maximum Range
2	18	79.6	0.6%	2.1%

These data indicate the precision of the mechanical aspect of the LECO analysis and do not necessarily reflect the precision of the total analytical procedure, which may be affected by factors such as sample homogeneity or contamination during sample preparation.

REFERENCES

- Bader, R.G., Gerard, R.D., et al., 1970. Initial Reports of the Deep Sea Drilling Project, Volume 4: Washington (U.S. Government Printing Office).
- Boyce, R.E. and Bode, G.W., 1972. Carbon and carbonate analyses, Leg 9, Deep Sea Drilling Project. *In* Hays, J.D. et al., Initial Reports of the Deep Sea Drilling Project, Volume 9: Washington (U.S. Government Printing Office), p. 797.

TABLE 1
Carbon-Carbonate Analyses, Leg 30

Sample (Interval in cm)	Subbottom Depth (m)	Total Carbon (%)	Organic Carbon	CaCO ₃
Hole 285				
2-1, 138	18.4	9.1	0.1	75
2-3, 86	20.9	7.5	0.1	62
2-4, 61	22.1	9.1	0.0	75
2-5, 131	24.3	7.8	0.1	64
3-2, 90	38.7	7.8	0.1	64
3-5, 60	42.9	7.8	0.1	64
4-1, 107	56.1	6.5	0.1	54
4-4, 50	60.0	5.3	0.1	44
4-6, 40	62.9	2.0	0.1	16
5-4, 80	79.8	1.8	0.1	14
Hole 285A				
1-2, 64	133.1	1.4	0.1	11
5-2, 81	455.3	0.8	0.1	6
Site 286				
1-4, 20	4.7	1.7	0.1	13
2-2, 68	18.7	0.3	0.1	2
3-4, 100	41.0	1.9	0.1	15
5-5, 100	80.5	0.2	0.1	1
6-4, 110	98.1	3.7	0.1	31
8-1, 100	131.5	5.4	0.1	44
9-5, 66	156.2	2.7	0.1	22
15-1, 140	264.9	1.9	0.1	16
17-5, 63	308.1	1.5	0.1	12
23-2, 95	418.0	0.4	0.1	3
25-4, 12	458.1	0.2	0.1	1
25-4, 55	458.6	1.2	0.1	9
29-5, 99	536.5	0.0	0.0	0
35-1, 111	644.6	0.1	0.1	0
Site 287				
1-3, 115	4.2	2.0	0.5	13
5-4, 59	79.9	5.4	0.2	43
5-4, 67	80.0	4.8	0.2	38
6-3, 111	97.6	0.9	0.3	5
6-3, 122	97.7	4.0	0.4	30
6-3, 129	97.8	4.3	0.4	32
8-1, 19	131.7	0.3	0.2	1
8-1, 44	131.9	0.2	0.2	0
8-3, 74	135.2	0.1	0.1	0
9-2, 74	152.7	0.1	0.1	0
10-1, 145	171.0	0.2	0.1	1
10-2, 15	171.2	0.1	0.1	0
10-2, 75	171.8	9.7	0.0	81
10-3, 58	173.1	9.2	0.1	76
10-4, 92	174.9	10.3	0.1	85
11-4, 61	184.4	6.8	0.1	56
14-3, 5	210.6	6.8	0.1	56

TABLE 1 - Continued

Sample (Interval in cm)	Subbottom Depth (m)	Total Carbon (%)	Organic Carbon	CaCO ₃
Hole 288A				
1-2, 50	2.0	9.2	0.1	76
3-6, 53	37.3	11.1	0.1	92
3-6, 26	37.1	8.1	0.1	66
5-3, 85	71.4	9.3	0.1	77
6-2, 100	88.7	11.4	0.0	95
9-1, 41	171.9	11.3	0.1	93
Hole 288A				
3-2, 132	345.8	11.4	0.0	95
6-1, 71	457.7	11.7	0.0	97
8-2, 63	535.1	11.8	0.0	98
8-2, 144	535.9	11.7	0.0	97
9-3, 20	574.6	11.7	0.0	98
10-1, 86	609.9	11.5	0.0	96
14-1, 106	724.1	10.6	0.0	88
16-1, 99	762.0	8.3	0.0	69
20-2, 71	848.7	10.0	0.1	83
21-2, 111	858.6	9.7	0.1	80
22-2, 141	868.4	5.5	0.0	46
23-3, 99	879.0	8.9	0.0	74
25-1, 107	895.1	7.5	0.0	62
27-2, 69	934.2	8.8	0.0	73
28-1, 125	952.3	4.5	0.0	37
29-1, 114	971.1	3.6	0.0	30
30-1, 102	980.5	3.4	0.1	28
Site 289				
1-1, 90	0.9	10.8	0.1	89
3-6, 80	27.6	11.0	0.1	90
4-3, 119	32.7	11.0	0.1	91
6-1, 89	48.4	10.9	0.1	90
8-1, 55	67.6	11.1	0.1	91
10-3, 70	89.2	11.2	0.1	93
12-2, 70	106.7	11.4	0.1	94
14-2, 13	125.4	11.3	0.1	94
16-2, 20	144.3	11.5	0.1	95
18-2, 35	163.4	11.5	0.1	95
20-2, 53	182.6	11.6	0.1	96
22-2, 122	202.2	11.6	0.0	96
24-2, 23	220.2	11.6	0.0	96
26-3, 56	241.5	11.4	0.0	95

TABLE 1 - Continued

Sample (Interval in cm)	Subbottom Depth (m)	Total Carbon (%)	Organic Carbon	CaCO ₃
28-3, 63	260.5	11.4	0.1	95
30-3, 108	279.6	11.3	0.0	93
32-3, 64	298.1	11.3	0.1	93
34-3, 59	317.1	11.4	0.0	94
36-3, 63	336.4	11.4	0.0	94
38-3, 62	355.6	11.3	0.1	93
40-3, 52	374.4	11.4	0.1	94
42-4, 67	395.2	11.3	0.1	93
44-3, 17	412.0	11.1	0.1	91
47-3, 27	440.3	11.1	0.0	92
48-3, 43	450.4	11.5	0.0	95
50-3, 67	469.7	11.4	0.0	95
52-3, 128	489.3	11.5	0.0	95
54-3, 100	507.5	11.3	0.0	93
56-3, 83	526.3	11.3	0.0	94
58-3, 86	545.9	11.3	0.0	94
60-3, 73	564.2	11.4	0.0	95
62-2, 52	581.5	11.6	0.0	96
64-3, 58	602.1	11.5	0.0	95
66-3, 104	621.5	11.2	0.1	93
68-3, 62	640.1	11.5	0.0	96
70-3, 55	659.6	11.4	0.0	95
72-3, 71	678.2	11.2	0.0	93
74-3, 37	697.4	11.1	0.0	92
76-3, 79	716.3	11.2	0.0	93
78-3, 77	735.3	11.3	0.0	93
80-3, 80	754.3	11.3	0.0	94
82-3, 47	773.0	11.1	0.0	92
84-2, 23	790.2	11.2	0.0	93
86-3, 67	811.2	11.5	0.0	96
88-3, 38	829.9	11.6	0.0	96
88-3, 63	830.1	11.6	0.0	96
90-3, 60	849.1	10.9	0.0	90
94-3, 70	887.2	11.5	0.0	96
96-1, 101	903.5	11.2	0.0	93
98-3, 135	925.9	10.9	0.0	91
99-5, 87	937.9	10.9	0.0	90
102-1, 93	960.4	11.2	0.0	93
106-3, 103	1001.5	11.1	0.0	92
108-1, 65	1017.2	11.4	0.0	95
110-1, 134	1036.8	6.2	0.0	51
118-1, 106	1112.6	12.0	0.0	100
124-2, 149	1167.5	11.9	0.0	99
130-7, 0	1230.5	11.9	0.0	99