

APPENDIX I. CARBON AND CARBONATE ANALYSES, LEG 20

Gerald W. Bode, Scripps Institution of Oceanography, La Jolla, California

Leg 20 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°-110°C and then ground to a homogeneous power. The ground sediment was redried and two samples, a 0.1-gram and a 0.5-gram sample, were then weighed into LECO clay crucibles. The 0.5-gram sample was acidified with dilute hydrochloric acid and washed with distilled water. The sample was then dried and analyzed for acid-insoluble carbon, listed in the table as "organic" carbon. The 0.1-gram sample was analyzed for total carbon without further treatment. If the result showed less than 10% CaCO₃, an additional 0.5-gram 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.

Precisions for the analyses are as follows:

Total carbon:

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

(0% to 1.2%): ±0.4% (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).
- 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 IX: Washington (U. S. Government Printing Office), p. 747.

TABLE I
Carbon-Carbonate Analyses, Leg 20

Core, Section Top of Interval (cm)	Depth in Hole (m)	Carbon Total (%)	Organic Carbon (%)	CaCO ₃ (%)
Site 194				
1-1, 12	37.6	0.4	0.2	1
1-3, 25	40.8	0.5	0.3	1
1-5, 60	44.1	0.2	0.2	0
1-6, 56	45.6	0.2	0.2	0
2-1, 149	143.5	0.1	0.1	1
2 2, 74	144.2	0.1	0.1	0

TABLE I - Continued

Core, Section Top of Interval (cm)	Depth in Hole (m)	Carbon Total (%)	Organic Carbon (%)	CaCO ₃ (%)
2-3, 96	146.0	0.1	0.1	0
2-4, 75	147.3	0.2	0.1	1
2-5, 75	148.8	0.1	0.1	0
Site 195				
1-1, 141	64.4	0.1	0.1	0
1-2, 86	65.4	0.2	0.1	1
1-3, 79	66.8	0.1	0.1	0
1-4, 87	68.4	0.1	0.1	0
1-5, 122	70.2	0.1	0.1	0
1-6, 68	71.2	0.1	0.1	0
2-1, 117	121.2	0.1	0.1	0
2-2, 75	122.3	0.1	0.1	0
2-3, 75	123.8	0.1	0.1	0
2-4, 75	125.3	0.1	0.1	0
Site 196				
1-1, 139	38.9	0.1	0.1	0
2-1, 124	105.2	0.1	0.1	0
2-2, 97	106.5	0.1	0.1	0
2-3, 51	107.5	0.1	0.1	0
2-4, 74	109.2	0.1	0.1	0
2-5, 61	110.6	0.1	0.1	0
2-6, 50	112.0	0.1	0.1	0
Hole 198A				
1-2, 145	93.5	0.1	0.1	0
1-3, 28	93.8	0.1	0.1	0
1-4, 14	95.1	0.1	0.1	0
1-6, 58	98.6	0.1	0.1	0
2-1, 99	101.0	0.1	0.1	0
2-2, 53	102.0	0.1	0.1	0
3-1, 50	110.0	0.1	0.1	0
3-2, 70	111.7	0.1	0.1	0
3-3, 30	112.8	0.1	0.1	0
3-4, 50	114.5	0.1	0.1	0
3-5, 50	116.0	0.1	0.1	0
3-6, 30	117.3	0.1	0.1	0
4-2, 94	121.4	0.1	0.1	0
4-3, 98	123.0	0.1	0.1	0
4-4, 50	124.0	0.1	0.1	0
4-5, 40	125.4	0.1	0.1	0
Site 199				
1-1, 137	58.9	8.8	0.0	73
1-2, 36	59.4	8.9	0.0	73
1-2, 147	60.5	0.2	0.1	1
1-3, 11	60.6	8.1	0.0	67
1-3, 100	61.6	0.3	0.1	2
1-4, 26	62.3	0.4	0.1	3
1-4, 114	63.1	10.6	0.1	87
1-5, 86	64.4	0.2	0.1	1
2-1, 99	68.0	0.1	0.0	0
2-2, 100	69.5	0.1	0.0	1
2-3, 60	70.6	0.1	0.1	0
2-4, 50	72.0	0.1	0.0	0

TABLE 1 – *Continued*

Core, Section Top of Interval (cm)	Depth in Hole (m)	Carbon Total (%)	Organic Carbon (%)	CaCO ₃ (%)
2-5, 102	74.0	1.9	0.0	15
2-6, 45	75.0	0.6	0.1	4
3-2, 106	79.1	0.1	0.1	0
3-2, 130	79.3	0.1	0.1	0
3-3, 70	80.2	0.1	0.0	0
3-4, 94	81.9	0.4	0.0	3
4-1, 100	87.0	0.2	0.0	1
4-2, 75	88.3	0.1	0.0	1
4-3, 50	89.5	0.7	0.0	5
4-4, 50	91.0	0.5	0.0	4
4-5, 52	92.5	1.9	0.0	16
4-5, 102	93.0	2.0	0.0	16

TABLE 1 – *Continued*

Core, Section Top of Interval (cm)	Depth in Hole (m)	Carbon Total (%)	Organic Carbon (%)	CaCO ₃ (%)
5-1, 93	143.9	0.1	0.0	6
5-1, 67	145.2	0.1	0.0	0
5-3, 60	146.6	0.1	0.0	0
5-4, 50	148.0	0.1	0.1	0
5-5, 73	149.7	0.1	0.0	0
5-6, 100	151.5	0.1	0.0	0
6-1, 48	200.5	0.2	0.0	2
6-1, 102	201.0	0.9	0.0	7
6-2, 30	201.8	0.9	0.0	7
6-2, 80	202.3	0.8	0.0	6
6-2, 120	202.7	0.9	0.1	6
6-3, 70	203.7	0.5	0.1	4
6-4, 84	205.3	0.5	0.1	4
6-5, 100	207.0	0.4	0.0	3