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Title of article "Aragonite-To-Calcite Transformation During Fresh-Water Diagenesis of Carbonates: Insights from Pore-Water Chemistry"

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Contents

Table A (3 pgs.)

TABLE A: CHEMICAL DATA AND CALCULATED AMOUNTS OF ARAGONITE DISSOLUTION AND CALCITE PRECIPITATION.

Sample	Depth	% Sea-water	Cl^-	Ca^{++}	Sr^{++}	Molar Sr^{++}/Ca^{++} x 10^{-2}	DISS	PPT	-log PCO_2	Aragonite Saturation Index
JULY, 1981, WOOD CAY										
S1A*	8	2.1	564.	193.	5.0	1.19	5.0	.5	1.62	.57
S1B	76	21.0	4380.	201.	23.2	5.28	25.7	23.2	1.94	.25
S1C	139	65.5	13600.	350.	27.2	3.55	26.3	24.9	2.00	.27
S2A*	0	1.8	495.	227.	6.1	1.23	6.3	.8	1.14	.48
S2B	47	18.8	3920.	228.	15.1	3.03	16.0	12.3	1.72	.30
S2C	90	24.4	5070.	239.	22.2	4.25	24.2	20.9	1.76	.28
S3A	25	8.3	1750.	185.	9.1	2.25	9.6	5.9	1.80	.27
S4	0	36.9	7650.	315.	21.2	3.08	21.7	17.7	2.03	.50
S5A	11	6.6	1510.	225.	6.4	1.30	6.2	1.3	2.02	.32
S5B	67	38.8	9830.	306.	22.3	3.33	22.0	19.6	1.99	.29
S6A*	0	2.4	605.	211.	7.1	1.54	7.6	2.6	1.33	.46
S6B	124	33.2	6880.	305.	18.2	2.73	18.3	14.2	2.28	.44
S6C	135	59.5	12300.	343.	15.1	2.01	12.0	9.9	2.16	.34
S8A	12	5.4	1100.	156.	8.1	2.38	8.9	5.5	2.00	.54
S8B	87	28.3	5870.	265.	17.2	2.97	17.6	14.0	2.18	.43
S8C	123	63.7	13200.	347.	13.1	1.73	9.2	7.5	2.14	.37
S8D	181	75.9	15700.	373.	8.1	0.99	1.8	.8	2.25	.40
S21*	0	2.6	576.	134.	8.5	2.90	9.7	6.6	1.85	.33
S23	0	7.9	1380.	249.	8.1	1.49	8.2	2.8	2.04	.37
JULY, 1981, WATER CAY										
T1B*	45	2.5	549.	105.	14.1	6.14	16.6	14.4	1.93	.20
T1C	108	22.9	4770.	201.	31.3	7.12	35.7	33.4	1.98	.20
T2B*	19	0.6	215.	85.5	16.1	8.61	19.3	17.4	2.39	.31
T2C	89	11.8	2670.	171.	44.4	11.88	52.8	50.2	2.21	.21
T3A*	5	2.0	494.	98.2	11.1	5.17	13.1	10.9	2.27	.40
T3C	53	14.7	3080.	174.	27.2	7.15	31.4	28.8	2.40	.41
T4	14	44.5	9210	546.	50.5	4.23	55.9	47.2	1.37	.52
T5	8	13.1	3000.	289.	30.3	4.80	34.8	29.2	2.03	.81
T6A*	14	1.9	521.	118.	23.2	8.99	27.8	25.3	2.30	.25
T6B	73	27.7	6190.	279.	31.3	5.13	34.8	31.1	2.32	.40
NOVEMBER, 1981, WOOD CAY										
S1A*	8	1.3	310.	160.	4.1	1.17	4.1	.3	1.33	.38
S1B	76	16.3	3050.	144.	19.0	6.04	21.3	19.7	1.90	.17
S1C	139	58.7	11300.	353.	20.0	2.59	18.0	15.7	1.91	.25
S2A*	0	1.5	472.	258.	6.6	1.17	6.8	.5	1.13	.25
S2B	47	6.7	1320.	160.	9.7	2.77	10.6	7.4	1.35	.04
S4	0	40.9	8480.	392.	9.0	1.05	5.9	.4	1.64	.53
S6A*	0	0.4	109.	68.0	2.0	1.35	2.1	.4	1.86	.10
S8A*	12	2.1	477.	74.6	4.6	2.82	5.1	3.5	2.40	.38
S8B	87	14.0	2940.	163.	11.0	3.09	11.6	9.1	1.88	.05
S8D	181	68.7	14200.	359.	9.0	1.15	3.5	2.2	1.92	.10
S21*	0	0.5	145.	93.3	5.2	2.42	5.9	3.7	1.78	.35
S23*	0	1.0	234.	131.	4.5	1.57	4.8	1.6	2.06	.86

Sample	Depth	% Sea-water	Cl^-	Ca^{++}	Sr^{++}	Molar Sr^{++}/Ca^{++} x 10^{-2}	DISS	PPT	-log PCO_2	Aragonite Saturation Index
NOVEMBER, 1981, WATER CAY										
T1B*	45	1.3	308.	68.5	11.0	7.35	13.1	11.6	2.10	.14
T1C	108	16.1	3640.	162.	21.0	5.93	23.6	21.6	2.09	.22
T2A*	0	0.0	36.8	63.7	12.0	8.62	14.5	13.0	2.27	.13
T2B*	19	0.3	116.	80.8	14.0	7.93	16.8	14.9	2.14	.15
T2C*	89	2.0	342.	44.8	13.0	13.27	15.6	14.8	2.30	.06
T3A*	5	0.6	157.	54.6	5.4	4.52	6.3	5.1	2.15	-.04
T3B*	16	1.0	254.	68.5	9.7	6.48	11.6	10.1	2.19	.14
T3C	53	3.6	774.	87.0	16.0	8.41	19.0	17.3	2.26	.17
T4	14	44.0	10700.	553.	51.0	4.22	56.4	47.7	1.35	.31
T5	8	26.6	5540.	453	49.0	4.95	55.9	47.7	1.68	.60
T6A*	14	0.1	47.2	48.3	13.0	12.31	15.7	14.7	2.15	-.01
T6B*	73	2.4	530.	57.1	8.6	6.89	10.1	8.9	2.44	.19
APRIL, 1982, WOOD CAY										
S1A*	8	2.4	628.	213.	5.6	1.20	5.6	.6	1.62	.55
S1B	76	26.6	5660.	262.	57.2	9.99	66.8	63.7	1.58	-.02
S1C	139	62.2	13200.	378.	47.8	5.78	51.7	49.7	1.82	.12
S2A*	0	2.7	641.	251.	6.6	1.20	6.8	.7	0.94	.11
S2C	90	32.4	6890.	278.	24.9	4.10	26.6	23.3	1.61	.06
S4	0	38.8	8240.	433.	23.1	2.44	22.9	16.5	1.41	.29
S6A*	0	2.3	590.	114.	4.3	1.73	4.6	2.0	1.99	.12
S8A	12	6.2	1350.	152.	7.3	2.20	7.7	3.5	2.44	.51
S8B	87	32.1	6810.	268.	36.3	6.20	40.6	37.8	1.91	.11
S8D	181	71.9	15300.	349.	9.6	1.26	3.6	3.0	1.96	.08
S21	0	4.1	900.	201.	11.9	2.71	13.4	8.8	1.35	.00
APRIL, 1982, WATER CAY										
T1B	45	6.3	1380.	150.	22.6	6.89	26.6	23.7	1.84	.10
T1C	108	30.0	6400.	252.	32.5	5.90	36.3	33.5	1.79	.03
T2A*	0	0.0	44.9	64.2	10.5	7.48	12.6	11.1	2.51	.33
T2B*	19	0.1	80.6	62.5	11.0	8.05	13.2	11.7	2.30	.08
T2C	89	16.0	3420.	190.	51.9	12.50	61.6	59.1	2.05	.10
T3A*	5	1.4	327.	101.	8.0	3.62	9.3	6.9	1.82	.04
T3B*	16	1.8	426.	95.1	12.4	5.96	14.7	12.6	1.99	.09
T3C	53	16.9	3620.	182.	29.0	7.29	33.3	30.9	2.21	.26
T4	14	45.7	9710.	459.	45.2	4.50	49.5	43.4	1.36	.08
T5	8	17.2	3670.	370.	34.3	4.24	39.0	31.9	1.66	.56
T6A*	14	0.1	64.0	67.9	12.9	8.69	15.5	14.0	2.10	-.04
T6B	73	34.1	7380.	280.	52.0	8.50	59.5	57.0	2.34	.25
AUGUST, 1982, WOOD CAY										
S1A	8	7.1	1500.	334.	9.5	1.30	9.5	1.9	-	-
S1B	76	41.4	8620.	327.	40.9	5.72	45.2	41.9	-	-
S1C	139	67.9	14100.	412.	33.2	3.69	33.2	30.5	-	-
S2A	0	10.3	2180.	417.	12.0	1.32	12.0	2.6	-	-
S2C	90	46.7	9710.	353.	27.8	3.60	28.7	25.1	-	-
S4	0	54.6	11300.	542.	25.0	2.11	23.6	16.0	-	-
S6A	0	10.4	2200.	240.	9.5	1.81	9.7	4.8	-	-
S8A	12	14.5	3040.	205.	9.7	2.16	9.7	6.2	-	-
S8B	87	45.2	9390.	334.	21.3	2.92	20.8	17.5	-	-
S8D	181	76.6	15900.	394.	8.1	0.94	1.7	.1	-	-

Sample	Depth	% Sea-water	Cl^-	Ca^{++}	Sr^{++}	Molar Sr^{++}/Ca^{++} x 10^{-2}	DISS	PPT	-log PCO_2	Aragonite Saturation Index
AUGUST, 1982, WATER CAY										
T1B	45	23.9	4980.	420.	39.0	4.25	44.0	36.3	-	-
T1C	108	56.8	11800.	344.	38.4	5.11	40.8	38.7	-	-
T2A*	0	0.2	82.4	65.6	8.6	6.00	10.3	8.7	-	-
T2B*	19	0.5	144.	77.7	12.0	7.06	14.3	12.5	-	-
T2C	89	42.2	8770.	353.	69.3	8.98	80.0	76.4	-	-
T4	14	68.4	14200.	686.	52.0	3.47	55.0	45.6	-	-
T5	8	40.4	8410.	691.	60.0	3.97	67.1	54.6	-	-
T6A*	14	1.2	281.	89.2	19.0	9.74	22.9	21.0	-	-
T6B	73	52.9	11000.	357.	37.2	4.77	39.6	36.7	-	-

Note: Chlorine, calcium and strontium concentrations (in ppm) in Wood and Water Cay pore-waters. The amounts of aragonite dissolution (DISS) and calcite precipitation (PPT) expressed as millimoles per liter. Depths are in centimeters below mean sea level. Asterisks indicate a freshwater sample.