

Appendix A, part 1: Stable Isotope Data for Organic and Soil organic material, Heiden series, Riesel, TX.

Identifier	Depth (cm)	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	N (wt %)	C (wt %)
e-1	0	-28.62	-1.09	2.31	43.11
c-1	0	-28.79	0.47	2.27	42.48
ra-1	0	-27.51	2.55	1.7	42.2
rf-1	0	-27.51	-0.18	1.96	42.82
rc-2	0	-28.47	1.21	2.33	44.46
rd-1	0	-26.89	0.59	2.14	42.89
re-2	0	-27.22	-1.32	2.51	43.48
rd-2	0	-27.24	-0.71	1.92	40.75
rc-1	0	-27.56	0.22	2.11	41.74
re-1	0	-28.53	-1.07	2.43	43.17
r c-1 5cm	-5	-16.4	3.28	0.32	5.04
r c-1 15cm	-15	-15.58	5.55	0.2	2.85
r c-1 25cm	-25	-16.1	5.99	0.14	2
r c-1 35cm	-35	-16.15	6.21	0.12	1.66
r c-1 45cm	-45	-16.73	5.97	0.09	1.23
r c-1 55cm	-55	-15.67	5.86	0.11	1.31
r c-1 65cm	-65	-16.43	5.55	0.09	1.21
r c-1 75cm	-75	-18	4.89	0.06	0.91
r c-1 100cm	-100	-18.92	4.79	0.06	0.6
r d-2ii 0cm	0	-17.33	3.12	0.7	10.71
r d-2ii 10cm	-10	-16.3	4.81	0.35	5.35
r d-2ii 20cm	-20	-15.49	5.79	0.27	3.95
r d-2ii 30cm	-30	-14.61	6.58	0.24	3.53
r d-2ii 40cm	-40	-14.94	6.45	0.2	3.07
r d-2ii 50cm	-50	-14.57	6.54	0.2	3.22
r d-2ii 60cm	-60	-14.62	6.83	0.19	2.68
r d-2ii 70cm	-70	-14.47	6.73	0.19	2.53
r d-2ii 80cm	-80	-15.09	6.51	0.15	2.13
r d-2ii 90cm	-90	-14.9	6.53	0.16	2.06
r d-2ii 100cm	-100	-15.85	6.35	0.14	1.87
r d-2ii 110cm	-110	-15.43	6.49	0.12	1.68
r d-2II 0cm	0	-17.58	3.2	0.63	9.75
r d-2II 10cm	-10	-16.27	5.11	0.25	3.52
r d-2II 20cm	-20	-15.43	5.76	0.21	3.12
r d-2II 30cm	-30	-14.66	6.35	0.13	1.76
A1 11-20	-15.5	-15.34	5.29	5.07	0.43
A1 21-120	-70.5	-15.50	6.61	1.4	0.12
E0 0-10	-5	-15.29	4.56	5.06	0.46
E0 10-20	-15	-14.10	6.37	3.64	0.33
E0 36-39	-37.5	-16.29	6.34	2.96	0.26
E0 48-52	-50	-16.29	5.35	2.15	0.16
E0 60-65	-62.5	-18.66	4.52	1.42	0.12
E0 70-79	-75	-18.32	4.45	0.56	0.08
E0 80-89	-85	-16.14	4.92	0.91	0.11

E1 0-5	-2.5	-14.48	3.37	8.68	0.71
E1 6-11	-9	-14.63	4.61	5.31	0.49
E1 16-21	-18.5	-14.31	6.25	3.96	0.38
E1 26-30	-28	-13.36	7.18	3.48	0.31
E1 36-40	-38	-14.24	6.46	3.01	0.28
E1 41-46	-43.5	-13.00	6.52	3.98	0.32
E1 50-110	-80	-14.33	5.52	1.93	0.19
E2 0-6	-3	-15.16	4.08	6.17	0.52
E2 13-16	-14.5	-14.64	6.57	3.43	0.33
E2 20-24	-22	-11.85	7.10	3.87	0.29
E2 30-35	-32.5	-14.38	6.74	2.5	0.24
E2 40-120	-80	-13.81	6.10	2.5	0.26
E2' 0-8	-4	-15.09	3.61	5.71	0.51
E2' 0-8	-4	-14.88	4.12	6.23	0.54
E2' 10-19	-14.5	-14.67	6.19	2.67	0.28
E2' 20-30	-25	-13.22	6.54	1.97	0.22
E2' 20-30	-25	-13.37	7.12	2.51	0.24
E2' 31-40	-35.5	-13.08	6.63	2.06	0.25
E2' 31-40	-35.5	-13.24	6.80	2.62	0.26
E2' 41-123	-82	-14.31	4.94	0.84	0.13
C1 0-5	-2.5	-16.77	3.00	5.47	0.41
C1 0-5	-2.5	-16.06	3.08	6.74	0.56
C1 11-14	-12.5	-10.86	5.41	3.09	0.19
C1 11-14	-12.5	-11.14	6.43	4.04	0.27
C1 25-28	-26.5	-14.66	6.11	1.65	0.16
C1 25-28	-26.5	-14.53	6.82	2.32	0.21
C1 46-48	-47	-15.52	5.70	1.06	0.1
C1 46-48	-47	-15.50	6.29	1.35	0.12
C1 60-64	-62	-15.22	6.69	1.29	0.12
C1 55-58	-56.5	-12.83	6.33	1.65	0.12
C1 76-79	-77.5	-15.84	5.99	0.93	0.09
C1 85-87	-86	-16.02	5.66	0.7	0.07
C1 98-102	-100	-17.85	5.25	0.67	0.06
C1 115-120	-117.5	-18.08	5.24	0.57	0.06
C2 26-29	-27.5	-16.53	5.24	4.58	0.26
C2 41-45	-43	-14.80	6.93	3.67	0.27
C2 52-54	-53	-14.72	6.56	3.3	0.19
C2 59-61	-60	-13.86	7.36	3.02	0.23
C2 71-73	-72	-14.41	7.21	2.49	0.19
D1 10-20	-15	-15.52	5.56	3.87	0.33
D1 20-40	-30	-14.47	6.65	2.93	0.26
D1 50-80	-65	-17.22	6.88	1.56	0.11
D1 80-120	-100	-19.51	5.95	1.39	0.08
D2° 15-20	-17.5	-16.48	5.27	5.92	0.51
D2° 26-30	-28	-15.57	6.30	4.56	0.38
D2° 37-52	-44.5	-14.93	6.44	4.09	0.32
D2° 81-120	-100.5	-14.71	7.05	2.33	0.18
D2 0-5	-2.5	-17.34	3.58	7.41	0.61
D2 6-11	-8.5	-16.53	5.01	6.54	0.55

D2 13-15	-14	-16.61	5.38	4.62	0.39
D2 16-19	-17.5	-15.83	5.98	5.06	0.42
D2 20-24	-22	-15.56	6.16	4.01	0.32
D2 30-36	-33	-14.82	6.96	3.26	0.25
D2 38-46	-42	-14.76	7.05	3.04	0.22
D2 50-53	-51.5	-14.63	7.36	2.79	0.21
D2 50-53	-51.5	-14.42	7.43	3	0.23
D2 56-60	-58	-14.24	7.57	2.46	0.19
D2 56-60	-58	-15.42	7.54	3.03	0.21
D2 68-75	-71.5	-16.04	7.15	2.04	0.16
D2 68-75	-71.5	-15.27	7.20	2.18	0.17
D2 88-93	-90.5	-16.44	6.23	1.23	0.1
D2 88-93	-90.5	-16.68	6.58	1.7	0.13
D2 98-103	-100.5	-17.10	6.35	1.36	0.11
D2 98-103	-100.5	-17.25	6.00	1.53	0.12
D2II 0-3	-1.5	-17.97	3.78	6.61	0.48
D2II 10-15	-12.5	-15.47	6.24	4.18	0.35
D2II 30-35	-32.5	-14.86	6.88	3.1	0.23
D2II 45-48	-46.5	-14.04	7.04	2.88	0.24
D2II 51-54	-52.5	-14.13	7.15	2.68	0.21
D2II 72-74	-73	-14.73	6.95	1.66	0.14
D2II 79-83	-81	-15.29	7.15	2.06	0.16
D2II 93-96	-94.5	-15.30	6.52	1.37	0.11
D2II 101-104	-102.5	-15.41	6.65	1.7	0.13
D2II 111-115	-113	-17.37	6.31	1.49	0.11

Appendix A, part 2: Stable Isotope Data for Soil Organic Material treated with 6N HCl, Heiden series, Riesel, TX

Sample#	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	C wt %	N wt %
E1 0-5	-14.36	1.90	2.45	0.18
E1 0-5	-14.40	2.96	2.86	0.26
E1 26-30	-13.05	5.01	0.97	0.08
E1 50-110	-13.07	3.16	0.34	0.03
E1 50-110	-13.46	4.90	0.34	0.05
E2 13-16	-14.08	5.15	1.36	0.11
E2 40-120	-12.67	3.55	0.46	0.04
E2 40-120	-14.35	6.41	0.48	0.04
D2 II 0-3	-17.01	3.57	3.36	0.27
D2 II 0-3	-17.14	3.59	4.14	0.37
D2 II 0-3	-17.15	3.72	4	0.35
D2 II 51-54	-14.35	6.95	0.97	0.08
D2 II 51-54	-14.41	6.90	0.96	0.09
D2 II 111-115	-15.37	4.06	0.42	0.03
D2 II 111-115	-15.80	5.47	0.58	0.05

Appendix A, part 3: Stable Isotope Data for Pedogenic and Lithogenic Carbonates, Heiden series, Riesel, TX.

Sample ID	$\delta^{13}\text{C}$ (‰VPDB)	$\delta^{18}\text{O}$ (‰VPDB)
E-0 15-25CM SOFT	-1.24	-3.68
E-0 15-25CM SOFT	-1.31	-3.86
E-0R SOFT	-0.98	-3.36
RE-0 36CM	-2.26	-6.92
RE-1 15CM	-1.52	-3.58
D-2 15-25CM SOFT1	-1.77	-4.11
D-2 15-25CM SOFT2	-1.85	-4.36
D-2 70-80CM SOFT	-1.69	-4.21
D-2 70-80CM SOFT2	-1.78	-4.23
C-1 15-25CM MARINE	-1.94	-2.81
C-1 35-45CM SOFT POWDER	-1.45	-4.25
C-1 65-75CM MARINE	-1.65	-3.96
C-1 65-75CM SOFT POWDER	-1.37	-4.30
C-1 90-100CM MARINE	1.77	-3.18
C-1 90-100CM SOFT POWDER 2	-0.92	-4.08
C-2 15-25CM SOFT POWDER	-2.22	-4.56
C-2 45-55CM SOFT	-1.81	-3.95
C-1 90-100CM SOFT	-1.34	-4.18

Appendix A, part 4: Stable Isotope Data for Pecan Gap Chalk, Marlin, TX

Sample ID	$\delta^{13}\text{C}$ (‰VPDB)	$\delta^{18}\text{O}$ (‰VPDB)
PG-1A	1.02	-3.45
PG-2A	0.89	-3.66
PG-1D	1.02	-3.45
PG-2B	0.78	-2.78
PG-1A	0.85	-3.24
PG-1C	1.10	-3.43
PG-1B	1.30	-3.59
PG-1A	0.90	-3.25