

Table S1: Major physicochemical parameters of sampling points

Zone	Sampling points	Distance from the spring (m)	Sample	Sampling date	Temperature (°C)	pH	Conductivity ($\mu\text{S}\cdot\text{cm}^{-1}$)	Alkalinity ($\text{meq}\cdot\text{L}^{-1}$)	TOC (ppm)	Log pCO ₂ ^a (mbar)	pCO ₂ (x atm. conc.)	Anions ($\text{mg}\cdot\text{L}^{-1}$)					Cations ($\text{mg}\cdot\text{L}^{-1}$)				IS calcite
												Cl ⁻	NO ₃ ⁻	SO ₄ ²⁻	PO ₄ ³⁻	HCO ₃ ⁻	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺	
1	1	0	Mer16-11	12/6/16	2.6	6.6	547	2.10	6.21	26.30	66	38.17	32.40	54.09	*	128.10	24.78	3.06	8.12	60.75	-1.56
	2	107	Mer16-13	12/6/16	7.12	7.1	618	4.60	6.44	19.05	48	25.47	25.65	51.64	*	280.60	13.85	1.29	10.26	88.33	-0.34
	3	217	Mer16-14	12/6/16	5.8	7.5	624	2.90	4.80	4.79	12	24.83	21.41	51.89	*	176.90	14.76	1.05	10.60	90.19	-0.1
	4	354	Mer16-15	12/6/16	4.1	7.59	673	2.80	7.75	3.63	9	23.32	10.61	54.96	*	170.80	12.99	2.21	10.88	97.00	-0.02
	5	435	Mer16-31	3/26/17	10.7	7.62	703	6.74	6.86	8.91	22	27.94	30.37	65.62	0.52	411.14	15.26	5.39	8.55	109.08	0.52
	6	484	Mer16-30	3/26/17	11.7	7.64	684	5.46	5.97	6.92	17	24.04	19.03	62.74	*	333.06	13.66	3.94	10.14	104.46	0.46
2	7	689	Mer16-29	3/26/17	12.6	8.15	677	5.60	9.14	2.24	6	24.29	18.64	62.24	*	341.60	13.60	3.08	10.04	106.12	1.00
	8	837	Mer16-27	3/26/17	10	8.08	668	5.65	5.99	2.57	6	23.78	17.82	61.01	*	344.65	13.68	2.96	9.91	103.79	0.89
	9	912	Mer16-6	11/8/16	8.6	8.17	704	5.23	4.99	1.91	5	34.38	89.77	19.30	0.03	319.26	19.35	3.75	14.06	147.46	1.05
	9	912	Mer16-26	3/26/17	9.6	8.1	670	5.49	5.94	2.34	6	23.70	18.01	60.97	*	334.89	13.64	2.95	9.89	104.05	0.89
	10	912	Mer16-7	11/8/16	8.5	8.16	705	4.31	5.75	1.58	4	34.60	91.57	19.23	*	263.07	19.93	3.99	14.29	150.60	0.97
	10	912	Mer16-20	12/6/16	6.6	8.46	705	5.20	5.77	0.63	2	24.80	14.34	68.38	*	317.20	13.82	2.83	10.92	93.48	1.13
	10	912	Mer16-25	3/26/17	9.8	8.14	669	6.17	5.60	2.40	6	23.48	17.43	60.27	*	376.37	13.70	3.38	10.20	104.74	0.98
3	11	969	Mer16-8	11/8/16	7.8	8.06	679	3.77	7.17	1.74	4	30.55	97.38	10.80	*	229.87	20.19	1.28	13.95	139.93	0.78
	12	980	Mer16-19	12/6/16	5.6	8.36	681	3.60	6.68	0.81	2	22.27	9.34	76.28	*	219.60	14.28	1.13	10.58	110.28	0.94
	12	980	Mer16-24	3/26/17	7.4	8.02	644	5.24	7.03	2.63	7	20.09	7.22	70.60	*	319.64	13.62	1.13	9.76	102.16	0.75
	13	991	Mer16-9	11/8/16	8.5	8.21	704	3.92	6.20	1.29	3	33.47	96.56	15.62	0.17	238.94	19.70	3.02	14.17	148.18	0.98
	13	991	Mer16-23	3/26/17	8.8	8.46	668	6.03	6.31	1.12	3	23.36	13.99	64.86	*	367.83	13.60	2.81	9.97	105.18	1.27
	14	1011	Mer16-28	3/26/17	11.9	7.96	669	5.55	6.14	3.39	8	23.92	18.13	61.34	*	338.55	13.75	3.00	9.97	105.00	0.8
	15	1018	Mer16-10	11/8/16	8.4	8.42	706	4.25	5.75	0.85	2	34.91	92.40	19.26	*	259.12	19.54	3.85	14.18	149.79	1.21
	16	1023	Mer16-4	11/8/16	7.3	8.14	703	7.64	5.98	2.88	7	33.51	89.24	18.12	*	466.20	19.46	3.67	13.94	141.46	1.14

17	1032	Mer16-22	3/26/17	8.3	8.13	668	6.11	7.24	2.40	6	23.56	17.57	61.88	*	372.71	13.64	2.94	10.02	106.98	0.96
18	1037	Mer16-18	12/6/16	6.5	8.53	705	3.40	5.26	0.79	2	24.26	13.94	68.59	*	207.40	13.53	2.62	10.67	110.28	1.09
19	1080	Mer16-1	10/21/16	10.8	8.31	712	5.56	4.12	1.48	4	35.97	90.06	22.82	*	339.08	19.26	3.52	13.84	142.16	1.23
19	1080	Mer16-5	11/8/16	7.2	8.24	704	5.34	5.73	1.62	4	34.00	90.95	18.27	*	325.76	19.66	3.57	14.21	149.70	1.11
19	1080	Mer16-16	12/6/16	6.5	8.6	704	3.50	5.94	0.45	1	24.74	12.86	68.46	*	213.50	13.78	2.76	10.77	88.11	1.08
19	1080	Mer16-21	3/26/17	8.2	8.03	667	6.61	6.44	3.31	8	23.39	17.28	61.38	*	403.21	13.49	2.78	9.87	104.93	0.88

Average by zone

Zone	pH	Conduc.	Alkal.	TOC	pCO ₂	pCO ₂	Cl ⁻	NO ₃ ⁻	SO ₄ ²⁻	PO ₄ ³⁻	HCO ₃ ⁻	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺	IS _{calc}
1	7.34	641	4.1	6.34	11.60	29	27.29	23.24	56.78	-	250.1	15.88	2.82	9.76	91.63	-0.5
2	8.18	685	5.38	6.17	1.95	5	27.01	38.22	50.20	-	328.15	15.39	3.28	11.33	115.75	0.99
3	8.25	686	5.04	6.14	1.77	4	27.71	47.64	45.59	-	307.24	16.25	2.72	11.85	121.72	1.01

^a pCO₂ is expressed in times atmospheric concentration (x atm. conc.); (*) below the threshold of detection; (-) no data