

Price et al., 2017, Alkaline vents and steep Na⁺ gradients from ridge-flank basalts—Implications for the origin and evolution of life: Geology, <https://doi.org/10.1130/G39474.1>.



Figure DR 1

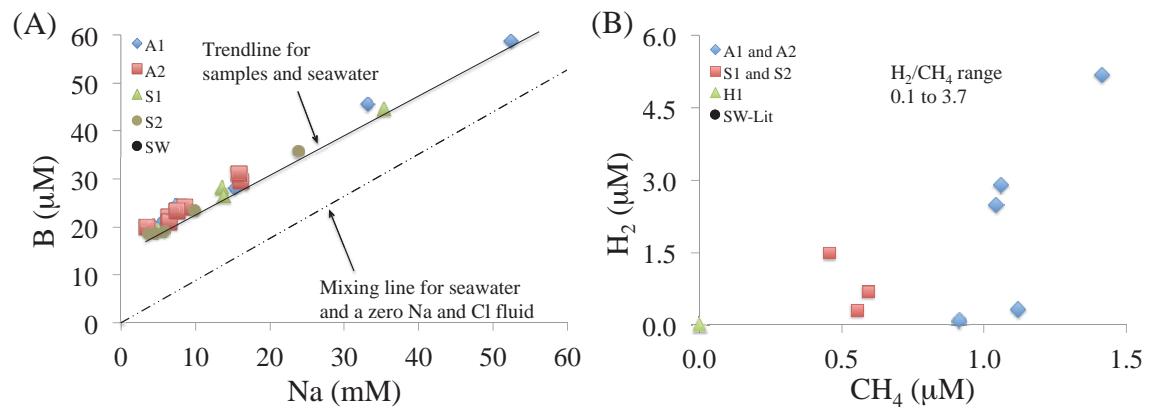


Figure DR2

Data Repository Table DR1. Field and laboratory geochemical data for Strytan and Arnarnesstrytan vent fluids.

Site	Sample ID and type	Field Data					Major ions in seawater								Trace elements in seawater						
		Date	T °C	pH	H ₂ S μM	ORP mV	TDS ppm	Na mM	Mg mM	K mM	Ca mM	Cl mM	SO ₄ mM	Sr μM	B μM	Si mM	Al μM	As nM	Mo nM	W nM	
A1	A1-2 bag	7/10/13	66.6	9.72	n.a.	-81	1343	15.2	1.07	0.25	0.37	11.9	0.83	1.85	28.1	1.8	2.7	161.3	82.4	19.4	
	A1 syr. 3	7/10/13	66.6	9.70	6.5	-80	3541	33.2	3.36	0.67	0.82	37.0	2.29	5.31	45.6	1.9	2.6	151.7	56.0	18.7	
	A1 syr. 4	7/10/13	66.6	9.81	7.8	-95	683	7.4	0.40	0.11	0.24	5.8	0.51	0.77	24.5	2.1	2.6	169.8	57.0	18.5	
	A1 A-B gas syr.	7/12/13	66.6	9.86	n.a.	-115	527	5.6	0.18	0.07	0.20	3.4	0.36	0.46	21.2	1.9	2.7	163.1	48.1	12.4	
	A1 syr. 1i	7/12/13	66.6	9.60	7.6	-91	5758	52.9	5.64	1.12	1.23	62.0	3.66	8.88	62.1	1.9	2.8	141.9	51.3	14.6	
	A1 syr. 1ii	7/12/13	66.6	n.a.	7.5	n.a.	n.a.	52.3	5.36	1.11	1.22	62.7	3.67	9.03	58.8	1.7	2.2	148.5	61.1	18.6	
A2	A2 syr. 4	7/11/13	78.1	10.08	7.9	-108	305	3.6	0.07	0.04	0.12	1.6	0.26	0.32	19.8	2.1	3.1	179.8	57.9	18.3	
	A2 bag i	7/11/13	78.1	10.01	8.1	-76	648	6.4	0.39	0.10	0.18	4.6	0.44	0.83	22.0	1.9	3.1	174.0	56.7	18.9	
	A2 bag ii	7/11/13	78.1	n.a.	7.2	n.a.	n.a.	6.5	0.38	0.10	0.18	4.5	0.44	0.80	20.9	1.9	2.9	167.8	54.6	18.3	
	A2 C-D gas syr.	7/12/13	78.1	9.97	n.a.	-122	712	7.5	0.56	0.13	0.21	6.0	0.51	1.03	23.2	2.0	3.2	167.6	55.3	19.3	
	A2 syr. 1i	7/12/13	78.1	9.89	9.8	-94	1636	16.1	1.49	0.32	0.41	16.8	1.09	2.57	29.5	2.0	2.9	165.1	56.8	19.0	
	A2 syr. 1ii	7/12/13	78.1	n.a.	7.5	n.a.	n.a.	15.8	1.59	0.31	0.40	12.7	0.84	2.55	31.1	2.0	3.0	162.5	54.3	18.2	
S1	S1 bag ii	7/12/13	72.1	10.02	11.9	-119	1379	13.6	1.36	0.26	0.30	10.8	0.75	2.12	28.2	1.8	4.6	232.0	47.2	9.9	
	S1 bag i	7/12/13	72.1	n.a.	12.5	n.a.	n.a.	13.8	1.33	0.28	0.30	12.5	0.87	2.13	26.5	1.8	4.9	232.5	47.3	10.7	
	S1 A-B gas syr.	7/13/13	72.1	9.79	n.a.	-157	3781	35.4	3.79	0.75	0.80	40.2	2.41	6.14	44.7	1.7	3.7	207.0	46.9	10.4	
	S1 C-D gas syr.	7/13/13	72.1	10.14	n.a.	-160	464	5.0	0.31	0.08	0.10	2.7	0.29	0.60	19.4	1.7	4.4	231.3	44.5	10.8	
S2	S2 A-B gas syr.	7/13/13	73.4	10.05	n.a.	-106	300	3.7	0.16	0.05	0.08	1.7	0.22	0.37	18.6	1.9	4.6	237.3	45.4	10.1	
	S2 bag i	7/13/13	73.4	10.06	12.4	-134	959	9.9	0.87	0.18	0.23	7.0	0.51	1.46	23.5	1.8	3.9	227.0	86.8	10.3	
	S2 C-D gas syr.	7/13/13	73.4	10.09	n.a.	-122	406	4.7	0.26	0.07	0.09	2.9	0.30	0.54	18.6	1.7	4.5	233.7	44.9	10.5	
	S2 syr. 1	7/13/13	73.4	9.91	12.4	-118	2430	23.8	2.52	0.50	0.55	14.7	1.18	3.90	35.8	1.8	3.5	211.5	33.4	8.7	
	S2 bag ii	7/15/13	73.4	10.22	11.9	-82	529	5.9	0.40	0.09	0.12	4.1	0.36	0.74	19.0	1.6	4.4	231.4	44.9	0.0	
End Member Average				10.03		-122	399	4.5	0.18	0.06	0.12	2.4	0.29	0.44	19.8	1.9	3.7	202.9	49.0	12.9	
SW-lit		-	-	7*	8.15	-	215	36450	468.0	53.3	9.97	10.40	546.0	28.1	0.09	0.5	0.1	0.04	26.0	0.1	trace

Notes: *7°C was temperature of Eyjafjord during sampling expedition. n.a. = not analyzed. b.d. = below detection. bag = sample collected into bag; syr. = sample collected into BD syringe; gas syr. = sample collected into gas-tight syringe and processed for dissolved gas. Seawater literature values from Turekian, 1968.