

Table 2. Gas chemistry for samples collected in the central Aleutian Islands August 11–20, 2015.

[Feature refers to type of hydrothermal feature sampled; hot spring (HS), fumarole (F), mud posts (MP), and pool (P). Temperature of samples is listed in degrees Celsius. Concentrations of helium (He), molecular hydrogen (H₂), argon (Ar), molecular oxygen (O₂), molecular nitrogen (N₂), methane (CH₄), carbon dioxide (CO₂), ethane (C₂H₆), hydrogen sulfide (H₂S), and carbon monoxide (CO) are measured in milligrams per liter. D’Amore and Panichi gas geothermometer; t(D’A,P), given in degrees Celsius. R_c/R_A, ³He/⁴He corrected for atmospheric air]

Sample name	Collection date	Feature	Location notes	Temp	Bottle type	He	H ₂	Ar	O ₂	N ₂	CH ₄	CO ₂	C ₂ H ₆	H ₂ S	CO	C ₃ H ₈	C ₄ H ₁₀	CO ₂ /H ₂ S	t(D'A,P)	CO ₂ term	δ ¹³ C-CO ₂ (‰)	R _c /R _A	Grams gas	Moles steam	Molar gas/steam	
Akutan Volcano																										
AK-01 #1	8/17/15	FP	Upper area	108	T-handle	0.0011	0.8387	0.0044	0.0069	2.6183	0.2192	94.3423	0.0013	1.9677	<0.001	<0.0005	<0.0005	48	242	1	−10.82		0.1620	0.025	0.14807	
AK-01 #2				108	T-handle	<0.01	0.7678	0.0039	0.0260	2.5027	0.2143	94.3958	0.0014	2.0881	<0.001	<0.0005	<0.0005	45	240	1			0.2186	0.047	0.10520	
AK-06	8/21/15	F	Flank fumarole	104	T-handle	0.0009	0.7011	0.0064	0.1081	2.6244	0.2112	94.2362	0.0013	2.1105	<0.001	<0.0005	<0.0005	45	238	1	−10.54		0.1620	0.047	0.07823	
AK-07	8/21/15	FP	Upper area	79	Bubble	0.0008	0.6987	0.0112	0.0939	2.7988	0.2088	94.2322	0.0014	1.9543	<0.001	<0.0005	<0.0005	48	237	1	−10.64					
AK-08	8/21/15	FP	Upper area	94	Bubble	0.0007	0.6852	0.0032	0.0034	2.4288	0.2080	94.5477	0.0013	2.1217	<0.001	<0.0005	<0.0005	45	238	1	−10.68					
Fisher Caldera																										
FI-01	8/19/15	F	Mount Finch fumarole	99	T-handle	<0.01	7.5924	0.0142	0.1673	1.1122	0.0054	85.5212	<0.0002	5.5873	<0.001	<0.0005	<0.0005	15	387	1	−7.32	8.082	0.2186	0.335	0.01485	
FI-02	8/19/15	F	Mount Finch	101	Bubble	<0.01	8.9559	0.0056	0.0128	0.7618	0.0048	84.8450	<0.0002	5.4140	<0.001	<0.0005	<0.0005	16	397	1	−7.69					
FI-04	8/19/15	HS	Hot Spring valley	46	Bubble	0.0235	<0.0002	0.6741	0.1646	41.8955	0.1359	57.1065	<0.0002	<0.0005	<0.001	<0.0005	<0.0005		na	na	−10.10					
Makushin Volcano																										
MK-03	8/11/15	F	Upper Glacier valley	100.3	T-handle	0.0002	1.0153	0.0954	1.4596	9.6477	0.0043	85.0040	<0.0002	2.7734	<0.001	<0.0005	<0.0005	31	297	1	−12.58	3.763	0.1620	0.432	0.00853	
Tana volcano																										
Tana-2	8/14/15	HS/F	Tana east side	95.5	Bubble	0.0016	0.3124	0.0591	0.0524	6.6746	0.1258	91.5729	0.0013	1.1999	<0.001	<0.0005	<0.0005	76	215	1	−9.65	6.438				
Geyser Bight																										
GB-01	8/16/15	F	Upper area-high	99	T-handle	<0.0002	0.0242	0.6389	7.0294	46.7662	0.0096	44.9726	<0.0002	0.5475	<0.001	<0.0005	<0.0005	82	133	0.1	−12.97		0.0765	2.340	0.00074	
GB-08	8/16/15	HS/F	Lower area	99.8	T-handle	<0.001	0.3616	1.0494	16.5337	62.0377	0.0033	17.8239	<0.0002	2.1857	0.0047	<0.0005	<0.0005	8	238	0.1	−15.83		0.0194	3.916	0.00011	
GB-01	8/16/15	F	Corrected for air	99	T-handle	<0.0002	0.0386	0.0000	0.0000	0.0000	0.0154	98.0877	<0.0002	1.8583	<0.001	<0.0005	<0.0005	53								
GB-08	8/16/15	HS/F	Corrected for air	99.8	T-handle	<0.0002	0.8665	0.0000	0.0000	0.0000	0.0081	79.8612	<0.0002	19.2529	0.0114	<0.0005	<0.0005	4								