Chemical and isotopic composition of calculated hydrothermal fluids at various temperatures

Element or Species	Concentration, mmol/kg							
	Seawater [1]	100ºC	150ºC	200ºC	250ºC	300ºC	350ºC	EPR Fluid [2]
Na	463	476	484	503	527	542	607	430-510
Cl	540	541	541	545	550	553	574	490-580
K	9.8	0.743	2.2	4.96	9.22	15.1	29.1	23-26
Al	0.00002	0.0021	0.134	0.716	2.63	5	0.179	0.004-0.005
Si	0.18	0.471	2.11	3.85	6.14	7.27	11.6	15-20
Mg	52.6	2.43	0.052	0.048	0.021	0.011	0.098	0
Fe	0.0000015	0.0044	0.00043	0.0026	0.0022	0.191	63.2	0.7-2.5
Ca	10.2	48.3	33.4	18.9	8.11	1.04	0.774	11-20
SO4	28	18.5	5.69	1.5E-09	0	0	0	0
H_2S	0	0.00017	6900	0.419	2.31	5.72	14.2	6-9
pH	7.8	6.38	6.31	5.99	5.8	5.98	5.67	3.3-3.8
log $f(O_2)$	-1.24	-51.5	-45	-44.4	-40.2	-36.3	-32.1	-30.9
$\delta^{18}O$	0	-0.126	-0.202	-0.107	0.145	0.508	2.02	2
δD	0	0.021	0.022	0.2	0.406	0.721	2.67	2.5

1. Composition of ambient seawater at 2ºC.

2. Range in composition for 350ºC East Pacific Rise (21ºN) hot spring fluids.