

Exp313 ship seawater and drilling mud analyses

	pH at 25°C	Alkalinity meq/L tit'n	³⁵ Chloride mM tit'n	Br μM IC	⁸² Br/Cl molar IC x1000	Sulfate mM IC	SO4/Cl molar	NH4+ μM cond'y	Li μM ICP	Li/Cl molar x1000	Na mM chg.bal.	Na/Cl molar	K mM ICP	K/Cl molar	Mg mM ICP	Mg/Cl molar	Ca mM ICP	Ca/Cl molar	Sr μM ICP	Sr/Cl molar x1000	Ba μM ICP	Ba/Cl molar x1000	B μM ICP	B/Cl molar x1000	Al μM ICP	Si μM ICP	P μM ICP	Mn μM ICP	Fe μM ICP	
⁶ Method:	ISE																													
Ship Seawater #1 (Hole M0027A)	7.93	2.35	518.2	801	1.575	26.15	0.0505	0	47.0	0.0907	442.0	0.8529	9.90	0.0191	50.77	0.0980	9.99	0.0193	85.4	0.1649	0.1	0.00012	416	0.804	1.1	3	1.1	0.0	1.0	
Ship Seawater #2 (Hole M0028A)	7.95	2.30	511.3	777	1.570	25.60	0.0501	0	65.2	0.1276	431.0	0.8430	10.17	0.0199	51.79	0.1013	10.27	0.0201	89.4	0.1749	1.8	0.00352	451	0.882	1.6	151	0.4	0.0	0.4	
Ship Seawater #3 (Hole M0029A)	8.00	2.26	502.0					0.0000																						
Drilling Mud #1 (Hole M0027A)	7.44	3.45	504.8	778	1.568	25.59	0.0507	11	55.5	0.1099	426.4	0.8448	9.69	0.0192	48.48	0.0960	13.41	0.0266	120.1	0.2380	1.6	0.00326	418	0.827	3.5	109	0.8	1.2	0.4	
Drilling Mud #2 (Hole M0027A)	7.91	3.78	516.8	803	1.569	26.99	0.0522	14	59.3	0.1148	442.3	0.8558	9.21	0.0178	47.51	0.0919	14.26	0.0276	128.2	0.2480	1.9	0.00358	379	0.734	0.8	146	5.2	2.7	1.1	
Drilling Mud #3 (Hole M0027A)			525.1	835	1.584	26.90	0.0512	0	49.5	0.0943	447.0	0.8513	10.33	0.0197	51.58	0.0982	10.62	0.0202	90.0	0.1714	0.7	0.00137	422	0.804	2.4	70	12.4	7.3	11.7	
Drilling Mud #4 (Hole M0027A)	7.35	2.30	514.1	789	1.564	26.05	0.0507	0	46.9	0.0913	439.1	0.8542	9.88	0.0192	50.02	0.0973	9.99	0.0194	85.1	0.1656	0.3	0.00050	410	0.798	1.1	12	0.5	1.0	1.4	
Drilling Mud #5 (Holes M0028A and M0029A)	6.01	5.93	509.8	812	1.579	24.88	0.0488	0	59.3	0.1163	432.6	0.8487	9.95	0.0195	48.62	0.0954	12.92	0.0254	120.2	0.2358	2.2	0.00428	414	0.811	10.3	396	36.5	28.6	133.5	
Drilling Mud #6 (Hole M0029A)	6.93	3.72	522.1	820	1.573	27.12	0.0519	37	57.4	0.1099	441.8	0.8462	9.80	0.0188	49.67	0.0951	14.73	0.0282	127.2	0.2436	2.0	0.00374	412	0.790	3.2	266	4.6	16.0	49.9	
Drilling Mud #7 (Hole M0029A)	6.71	2.36	505.3	773	1.563	25.63	0.0507	28	51.6	0.1020	419.6	0.8304	10.80	0.0214	52.41	0.1037	12.04	0.0238	103.8	0.2055	0.9	0.00178	432	0.855	10.8	140	28.4	7.1	37.5	
IAPSO (calculated for chlorinity of 525 mM)		2.00	524.2	809	1.543	27.16	0.0518		25.4	0.0485	451.1	0.8605	9.82	0.0187	50.80	0.0969	9.89	0.0189	87.6	0.1671			397	0.757						

³⁵Chloride concentrations reported here were measured as chlorinity (=Cl+Br+I) but we have subtracted the measured Br concentrations from these measured chlorinities.

⁸²Br/Cl ratios reported here are x1000 and used data for both bromide and chloride produced by IC, as data produced by the same method yielded less noisy depth profiles for this ratio.

⁶Methods are ion specific electrode (ISE), electrochemical titration (tit'n), ion chromatography (IC), conductivity detection following separation through a gas-permeable membrane (cond'y), and inductively-couple plasma atomic emission spectrometry (ICP).
(see http://www.marum.de/en/Interstitial_pore_waters_IW.html)

Na was calculated by charge balance. Where a contributing ion was not analyzed its concentration was estimated from adjacent samples in calculating Na.

Blank spaces indicate that a species was not analyzed.