MS 304305-103, Table T10. Major and volatile compositions and trace element compositions of rocks, Holes U1309B and U1309D.

Core, section, interval (cm)	Piece	Depth (mbsf)	Nebulizer*	Igneous unit	Lithology	Rock name	Major element oxides (wt%)											LOI (wt%)	Volatiles (wt%)		Trace elements (ppm)									
							SiO_2	Al_2O_3	Fe_2O_3	MgO	MnO	CaO	Na_2O	K_2O	P_2O_5	TiO_2	Total		CO_2	H_2O	Cr	Ni	Ba	Sr	V	Y	Zr	Sc	Co	Cu
304-1309B-																														
1R-3, 17–21	3	2.07	5	1	Ultramafic rubble		60.21	0.62	6.69	32.72	0.15	<0.06	0.07	<0.01	0.05	0.03	100.55	7.51	0.16	8.21	1940	2401	<21	<5	21	<1.5	<2	6.5	110	NA
1R-3, 114–116	14	3.04	5	2	Plagioclase-phyric basalt		48.63	15.63	10.16	7.89	0.13	11.27	2.96	0.04	0.08	1.53	98.33	0.92	0.06	1.73	154	<115	23.9	126	295	35.5	77.4	39.2	71	<14
2R-1, 88–92	8	16.38	1	6	Sparsely plagioclase-phyric basalt		49.42	13.31	14.23	7.13	0.16	9.88	2.95	0.06	0.05	2.03	99.21	0.96	0.18	2.00	142	<115	<21	108	329	59.0	161.2	43.3	174	NA
2R-2, 20–23	2B	17.1	5	9	Olivine-plagioclase-phyric basalt		50.76	14.10	10.82	8.80	0.18	11.20	2.53	0.05	0.07	1.52	100.03	1.17	0.05	1.70	219	132	<21	97	303	40.5	103.5	44.2	89	NA
3R-1, 60–63	9	20.6	2	14	Aphyric basalt		50.39	14.28	10.33	7.66	0.13	11.36	2.89	0.07	0.16	1.93	99.20	1.20	0.11	1.64	242	<115	<21	115	287	50.9	144.6	43.4	<32	NA
3R-1, 71–74	10	20.71	1	15	Basalt breccias		51.29	10.41	8.91	13.14	0.09	10.91	2.20	0.06	0.04	1.31	98.37	1.99	0.10	2.57	476	370	<21	97	273	30.6	75.6	32.0	54	NA
5R-1, 127–129	18	30.77	2	20	Oxide diabase		52.01	14.50	8.86	6.85	0.11	10.97	3.38	0.04	0.17	2.20	99.09	1.16	0.05	1.30	157	<115	<21	109	318	50.4	141.0	41.5	<32	NA
5R-2, 90–94	5	31.84	2	20	Oxide diabase		48.91	12.66	12.32	9.91	0.14	10.36	2.29	0.05	0.11	1.37	98.12	1.90	0.13	2.33	210	<115	<21	78	284	36.0	86.7	41.3	<32	NA
6R-1, 97–102	9	34.17	2	22	Oxide diabase		50.99	13.65	11.58	7.76	0.18	10.69	2.72	0.03	0.15	1.55	99.30	0.93	<0.04	1.33	224	<115	<21	93	304	41.9	124.4	38.5	<32	NA
8R-1, 115–118	13	44.15	2	28	Gabbro	Gabbro	53.52	15.71	5.83	9.85	0.11	14.02	2.26	0.04	<0.03	0.36	101.72	1.17	0.05	1.26	341	<115	<21	97	192	15.8	10.6	42.8	<32	NA
10R-1, 0–3	1	52.5	1	28	Gabbro	Gabbro	49.68	22.62	4.51	7.43	0.07	13.30	2.41	0.04	<0.03	0.19	100.26	1.00	<0.04	1.54	444	158	<21	123	71	6.3	17.8	14.7	35	NA
11R-1, 100–104	8	58	1	32	Harzburgite		45.51	0.81	10.10	44.54	0.10	0.42	<0.03	<0.01	0.04	0.02	101.56	10.35	0.19	11.46	2488	2461	<21	<5	42	<1.5	<2	10.1	125	NA
11R-2, 88–90	7	59.2	4	32	Harzburgite		44.30	0.88	9.17	45.57	0.10	0.20	<0.03	<0.01	0.04	<0.01	100.28	11.73	0.14	12.71	2602	2715	<21	<5	41	<1.5	<2	9.8	149	NA
12R-1, 126–131	8	62.86	4	34	Oxide diabase		50.10	14.05	12.76	7.32	0.14	10.74	3.08	0.04	0.06	1.97	100.26	1.24	0.04	1.47	<140	<115	<21	103	348	52.9	147.4	44.8	76	NA
13R-1, 120–125	9A	67.3	1	35	Microdiabase		49.54	13.86	12.58	7.76	0.15	10.57	2.98	0.04	0.04	1.92	99.45	0.88	<0.04	1.30	<140	<115	<21	102	352	44.9	110.1	43.9	110	NA
14R-1, 107–109	10	71.99	1	40	Plagioclase-phyric basalt		53.11	14.76	7.06	8.44	0.13	12.81	3.17	0.04	0.04	1.50	101.05	1.45	0.49	1.29	<140	<115	<21	125	308	35.3	90.0	41.8	70	NA
15R-2, 80–84	6B	77.68	1	46	Troctolitic gabbro	Olivine gabbro	47.48	24.17	4.30	10.81	0.05	12.64	1.48	0.05	<0.03	0.06	101.05	2.16	<0.04	3.10	173	473	<21	112	24	<1.5	<2	5.1	49	NA
16R-3, 20–26	1	83.08	1	50	Olivine gabbro	Olivine gabbro	47.34	21.16	5.95	11.16	0.07	12.59	1.63	0.03	<0.03	0.22	100.15	2.71	<0.04	2.70	489	215	<21	105	76	5.4	7.7	16.6	44	NA
17R-2, 5–9	1	86.39	1	53	Olivine gabbro	Olivine gabbro	48.04	22.53	4.82	9.32	0.06	13.21	1.79	0.03	<0.03	0.17	100.01	2.10	<0.04	2.13	320	168	<21	113	74	5.5	<2	17.1	<32	NA
18R-1, 20–23	4	89.8	1	54	Sparsely plagioclase-phyric basalt		50.75	15.05	11.20	8.44	0.18	10.38	2.85	0.05	0.05	1.59	100.54	1.41	0.06	1.91	198	<115	26.7	100	309	41.4	89.2	41.7	108	NA
18R-2, 35–38	4	91.36	1	56	Gabbro	Gabbro	51.27	17.05	5.79	10.08	0.10	14.03	2.09	0.02	<0.03	0.30	100.74	1.36	0.04	1.20	702	143	<21	98	164	8.6	13.6	40.3	63	NA
18R-3, 110–112	16	93.57	4	60	Basalt		50.91	13.81	13.92	6.59	0.17	10.08	3.39	0.06	0.10	2.23	101.25	0.82	<0.04	1.49	<140	<115	<21	116	385	59.1	151.0	47.3	73	<14
19R-2, 38–40	4	95.96	1	62	Oxide diabase		51.95	15.77	10.75	8.02	0.16	11.43	3.08	0.03	0.06	1.43	102.68	0.55	<0.04	1.15	<140	<115	<21	101	294	38.0	61.8	44.8	40	<14
20R-2, 72–74	5	101.02	1	62	Oxide diabase		51.42	13.48	14.39	6.35	0.21	10.02	3.14	0.04	0.11	2.18	101.33	–0.12	<0.04	0.93	<140	<115	37.8	108	390	62.3	174.8	47.0	77	<14
304-1309D-																														
1R-1, 32–37	1	20.82	1	1	Plagioclase-phyric diabase		49.69	15.20	12.33	8.47	0.20	10.23	2.67	0.05	0.10	1.68	100.62	–0.15	<0.04	1.08	254	<115	<21	92	312	43.7	105.0	43.6	59	NA
2R-1, 85–90	8	27.65	1	5	Diabase		50.12	13.97	12.42	8.04	0.16	11.07	2.77	0.04	0.12	2.02	100.73	0.37	0.04	0.79	215	<115	<21	89	344	48.9	124.9	42.4	65	<14
4R-1, 21–23	3	31.61	4	6	Fine-grained diabase		51.41	13.57	12.49	7.51	0.16	10.56	2.95	0.04	0.10	1.89	100.69	1.08	<0.04	0.90	<140	<115	<21	95	357	47.4	124.0	43.4	75	<14
4R-2, 112–113	18B	34.02	4	8	Cataclastic gabbro	Gabbro	53.40	20.79	3.79	6.56	0.05	11.41	3.66	0.11	0.04	0.49	100.29	1.55	<0.04	0.61	1082	242	21.0	166	93	70.8	97.2	15.5	44	<14
5R-2, 52–57	2B	37.93	1	9	Medium-grained troctolitic gabbro	Olivine gabbro	48.55	19.37	5.56	14.66	0.08	11.49	1.24	0.04	<0.03	0.19	101.20	4.29	<0.04	3.09	1190	515	<21	83	74	13.5	13.5	14.8	49	NA
5R-3, 114–118	12	40.01	4	9	Medium-grained troctolitic gabbro	Olivine gabbro	47.14	21.89	4.99	12.03	0.07	12.25	1.56	0.05	<0.03	0.12	100.12	2.50	<0.04	2.68	278	393	<21	104	36	28.4	22.4	8.2	33	<14
6R-1, 124–129	17A	42.04	1	11	Olivine gabbro	Olivine gabbro	49.47	19.54	5.36	12.41	0.07	12.29	1.53	0.11	0.05	0.22	101.04	2.36	<0.04	2.27	821	342	<21	122	97	9.9	10.8	21.1	<32	NA
6R-2, 70–73	8	43	4	12	Diabase		50.57	14.60	12.56	8.03	0.19	11.05	2.76	0.04	0.07	1.76	101.63	0.95	0.04	1.04	218	<115	<21	95	329	43.8	111.2	43.8	68	25
6R-3, 16–21	1	43.6	6	12	Medium-grained diabase		51.84	14.60	13.12	7.71	0.20	10.64	2.97	0.04	0.09	1.88	103.08	0.22	<0.04	0.90	147	<115	<21	101	349	51.1	110.2	44.2	67	<14
7R-2, 26–33	1	46.84	6	14	Medium-grained diabase		49.31	14.65	12.34	8.08	0.19	11.23	2.63	0.04	0.08	1.64	100.21	0.45	<0.04	0.91	210	<115	<21	91	327	37.9	97.3	42.4	70	<14
7R-3, 102–105	16	49.05	3	16	Medium-grained gabbro	Gabbro	53.38	19.64	5.14	7.49	0.06	11.18	3.53	0.10	<0.03	0.23	100.76	1.35	<0.04	1.03	859	170	<21	164	83	120.0	29.6	17.4	34	<14
8R-2, 123–129	15	53.19	6	19	Troctolitic gabbro	Troctolite	46.64	12.26	7.74	26.05	0.09	7.54	0.33	0.02	0.03	0.14	100.83	6.33	<0.04	5.55	1103	1038	<21	27	58	8.7	10.8	14.2	81	<14
9R-1, 37–42	6	55.67	6	22	Fine-grained diabase		50.57	13.78	14.17	7.05	0.22	10.42	2.98	0.04	0.12	2.05	101.41	1.19	<0.04	0.93	145	<115	<21	97	358	52.9	112.6	46.9	80	46
9R-1, 73–77	11	56.03	3	23	Medium-grained olivine gabbro	Olivine gabbro	50.67	20.06	4.92	9.66	0.08	14.10	1.91	0.04	<0.03	0.18	101.65	1.20	<0.04	1.31	1239	219	<21	113	108	9.7	7.9	25.5	35	<14
10R-1, 107–111	12B	61.27	6	28	Wehrlite	Ultramafic rocks	42.86	1.17	14.99	36.43	0.15	3.94	0.09	<0.01	0.07	0.21	99.92	7.47	1.14	7.03	2671	1242	<21	31	98	6.4	17.0	24.9	128	<14
11R-2, 38–43	2	66.67	3	34	Layered olivine gabbro and troctolite	Olivine gabbro	46.87	18.05	6.21	19.19	0.07	10.34	0.89	0.03	0.03	0.12	101.81	4.50	<0.04	4.91	479	667	<21	72	50	2.1	2.4	10.6	59	<14
12R-1, 62–64	6	70.42	3	34	Troctolite with olivine gabbro bands	Olivine gabbro	49.01	22.46	4.75	11.04	0.06	12.77	1.77	0.04	<0.03	0.10	102.01	3.93	0.05	2.68	340	235	<21	119	57	2.0	<2	13.6	37	<14
13R-1, 59–67	4	75.09	3	35	Coarse-grained gabbro	Gabbro	53.32	17.20	5.28	10.03	0.08	14.17	2.43	0.02	<0.03	0.31	102.83	0.95	<0.04	1.20	268	<115	<21	97	167	13.0	4.4	40.6	41	15
14R-1, 96–103	15	80.36	4	41	Alternating troctolite and olivine gabbro sequence	Olivine gabbro	46.93	24.84	4.93	10.19	0.05	12.71	2.01	0.04	<0.03	0.07	101.79	1.66	<0.04	2.42	<140	312	<21	130	19	3.5	6.5	2.9	38	<14
14R-2, 128–132	13	82.02	1	42	Basalt		50.53	13.57	11.49	6.89	0.15	10.82	3.54	0.05	0.14	2.58	99.76	0.23	0.07	1.84	<140	<115	<21	110	403	71.1	158.5	46.6	84	<14
15R-2, 125–131	12	86.85	1	44	Medium-grained diabase		51.40	14.98	12.07	8.12	0.18	11.32	2.78	0.03	0.09	1.59	102.55	–0.28	<0.04	1.04	147	<115	<21	91	293	43.4	100.0	41.5	56	<14
16R-2, 62–68	5	91.12	1	44	Medium-grained diabase		52.27	13.95	12.25	7.71	0.19	10.72	2.67	0.04	0.07	1.58	101.46	0.52	<0.04	0.79	147	<115	<21	95	308	41.2	103.1	43.5	61	48
16R-4, 90–92	6	93.83	1	44	Medium-grained diabase		50.71	13.85	13.97	6.73	0.20	9.64	3.28	0.05	0.11	2.28	100.83	0.74	<0.04	1.00	<140	<115	<21	108	378	60.4	145.6	45.8	81	<14
16R-4, 136–140	12	94.29	1	45	Basalt		50.55	12.83	15.83	5.74	0.20	9.50	3.67	0.04	0.13	2.55	101.04	–0.05	<0.04	0.56	<140	<115	<21	108	391	68.5	184.5	47.3	90	<14
16R-5, 18–26	2	94.57	4	47	Coarse-grained gabbro	Gabbro	49.18	17.23	6.00	11.95	0.09	14.33	1.75	0.05	<0.03	0.19	100.79	0.94	<0.04	1.83	711	247	<21	86	121	9.4	4.2	30.9	41	<14
17R-1, 60–66	5B	99.3	1	49	Coarse-grained olivine gabbro	Olivine gabbro	50.04	25.59	2.78	4.46	0.04	14.46	2.58	0.04	<0.03	0.15	100.15	0.19	0.05	0.55	304	<115	<21	134	58	3.8	9.4	13.2	<32	<14
20R-1, 70–73	8	117.8	1	52	Fine-grained diabase		48.82	15.59	10.34	10.39	0.19	11.47	2.17	0.04	0.07	1.13	100.22	0.63	<0.04	1.98	433	199	<21	94	236	30.1	68.2	38.2	64	<14
22R-3, 43–49	4	129.41	1	55	Medium-grained troctolitic gabbro	Olivine gabbro	47.79	26.37	2.83	8.26	0.04	14.21	1.51	0.03	<0.03	0.13	101.19	2.23	<0.04	1.36	1094	225	<21	106	48	2.6	6.7	11.9	<32	<14
23R-1, 79–84	15	131.79	1	57	Troctolite	Troctolite	47.93	26.86	3.27	8.92	0.05	14.02	1.63	0.03	<0.03	0.18	102.89	2.51	<0.04	1.69	1074	NA	<21	102	66	4.7	4.4	12.5	NA	<14
23R-2, 0–4	1	132.5	1	58	Dunite	Peridotites	42.92	1.87	12.45	42.52	0.10	0.76	<0.03	<0.01	0.05	0.06	100.74	12.35	0.49	10.89	3137	NA	<21	<5	57	1.9	6.7	13.8	NA	<14
23R-2, 95–97	11	133.45	1	58	Troctolite	Troctolite	45.29	17.42	5.23	24.08	0.10	9.89	0.55	0.13	0.05	0.06	102.80	5.10	0.09	5.52	1744	1268	<21	62	37	2.4	NA	9.0	84	180
25R-3, 24–31	2	145.79	1	62	Olivine-bearing gabbro	Gabbro	52.31	17.95	5.17	9.11	0.10	14.32	2.03	0.01	<0.03	0.22	101.23	1.52	<0.04	0.83	779	NA	<21	89	144	7.4	4.9	33.7	NA	80
26R-1, 15–26	4	147.75	1	63	Orthopyroxene-bearing gabbro	Orthopyroxene-bearing gabbro	52.97	17.45	4.39	10.36	0.08	15.73	2.07	0.01	<0.03	0.22	103.29	1.48	<0.04	0.90	1385	NA	<21	89	149	7.4	5.8	40.7	NA	<14
26R-2, 127–134	9	149.96	1	65	Olivine-bearing gabbro	Olivine gabbro	47.41	18.29	5.94	11.38	0.10	14.14	1.73	0.02	<0.03	0.20	99.25	1.69	<0.04	1.61	1182	NA	<21	82	125	6.8	5.3	31.8	NA	106
27R-1, 88–94	9	153.18	1	68	Olivine gabbro	Olivine gabbro	50.05	18.35	4.79	11.00	0.08	14.45	1.67	0.02	<0.03	0.20	100.64	1.50	<0.04	1.54	1401	240	<21	91	117	8.3	<15	29.8	42	NA
28R-2, 70–74	2	158.68	1	70	Olivine-bearing gabbro	Gabbro	50.71	23.47	2.87	5.00	0.05	13.40	3.11	0.02	<0.03	0.14	98.78	0.31	<0.04	0.61	152	NA	<21	133	71	6.3	2.9	16.3	NA	<14
28R-4, 27–33	4	161.2	1	71	Orthopyroxene-bearing gabbro	Orthopyroxene-bearing gabbro	51.78	15.57	6.34	12.19	0.12	12.29	2.12	0.01	<0.03	0.28	100.72	0.72	<0.04	0.95	206	NA	<21	80	171	9.2	6.8	43.1	NA	15
30R-1, 58–65	9	167.28	1	75	Layered gabbro	Olivine gabbro	48.52	22.82	5.01	7.58	0.07	13.20	2.32	0.03	0.04	0.17	99.76	2.55	<0.04	1.53	254	212	<21	115	64	4.3	<15	13.0	38	NA
31R-1, 25–28	6	171.75	1	77	Dunite	Peridotites	44.16	0.19	10.84	43.46	0.08	1.16	<0.03	<0.01	0.06	0.02	99.99	12.78	1.24	12.19	1009	3077	<21	6	20	1.7	<15	5.3	147	NA
31R-2, 11–17	2	173.07	1	79	Harzburgite	Peridotites	43.76	0.87	10.03	43.39	0.09	1.15	<0.03	<0.01	0.05	0.04	99.40	12.85	1.28	13.15	2603	2363	<21	32	52	<1.5	<15	12.4	104	NA
32R-2, 22–30	2	177.84	1	82	Olivine-bearing gabbro	Gabbro	51.72	16.08	5.43	11.14	0.10	14.97	1.91	0.02	<0.03	0.29	101.66	0.63	<0.04	0.76	712	127	<21	77	191	9.1	<15	47.6	38	NA
33R-2, 55–64	2B	183.1	1	87	Olivine-bearing gabbro and gabbro	Olivine gabbro	52.04	16.23	6.02	11.95	0.10	14.05	1.88	0.01	<0.03	0.27	102.56	1.29	<0.04	1.37	473	161	<21	75	160	7.6	<15	40.6	46	NA
33R-3, 21–26	3	184.12	1	87	Olivine-bearing gabbro and gabbro	Gabbro	50.87	16.61	5.49	11.47	0.10	13.62	1.89	0.02	<0.03	0.17	100.25	1.62	<0.04	1.86	395	157	<21	69	132	7.2	<15	36.2	48	NA
35R-1, 53–65	7	191.33	1	88	Oxide gabbro	Oxide gabbro	43.25	10.21	22.16	7.79	0.22	11.15	1.86	0.03	<0.03	4.14	100.84	–0.32	<0.04	0.70	<140	166	<21	66	1287	23.4	25.2	61.6	131	NA
36R-3, 80–82	7B	199.29	1	89	Leucocratic dike	Leucocratic dike	63.06	16.17	4.01	4.85	0.05	4.80	7.95	0.13	<0.03	0.38	101.41	1.61	<0.04	0.88	<140	<115	83.5	94	62	141.0	328.3	1.4	44	NA
36R-3, 98–106	10	199.47	1	89	Olivine-bearing gabbro and gabbro	Gabbro	51.41	16.83	6.08	11.46	0.10	12.28	2.21	0.02	0.03	0.24	100.67	0.85	<0.04	1.09	296	<115	<21	89	149	7.4	<15	35.0	40	NA
38R-1, 41–51	2	205.61	1	89	Olivine-bearing gabbro	Gabbro	53.54	15.20	7.41	10.73	0.11	12.19	2.21	0.03	<0.03	0.42	101.86	0.90	<0.04	0.91	304	119	<21	84	198	11.8	16.2	43.9	43	NA
39R-2, 22–30	3	211.72	1	92	Olivine gabbro	Olivine gabbro	49.44	19.83	5.13	12.29	0.08	13.46	1.52	0.02	<0.03	0.17	101.96	1.99	<0.04	2.02	1048	275	<21	89	91	5.9	<15	24.2	36	NA
41R-1, 116–124	10B	220.66	1	97	Alternating troctolitic and olivine gabbro	Olivine gabbro	50.16	24.66	4.55	9.03	0.07	13.13	1.97	0.03	0.04	0.20	103.84	2.14	0.05	1.69	255	296	<21	111	64	13.7	NA	12.6	43	44
44R-1, 22–29	1	233.42	1	100	Olivine gabbro	Olivine gabbro	50.71	19.24	5.67	10.58	0.09	13.54	1.84	0.05	<0.03	0.22	101.95	1.20	0.04	1.68	1049	236	<21	96	120	9.9	NA	28.3	45	<14
45R-3, 18–24	2	240.88	1	102	Olivine-bearing/oxide-bearing gabbro	Oxide gabbro	41.32	6.97	25.37	7.85	0.27	10.17	1.61	0.03	0.14	5.25	98.99	–0.28	<0.04	1.07	191	<115	<21	51	615	86.4	NA	61.8	134	<14
48R-1, 44–53	6	252.84	1	107	Gabbro with troctolitic bands	Gabbro	48.90	15.55	4.60	11.97	0.10	16.82	1.14	0.02	<0.03	0.28	99.41	0.84	0.05	0.90	3060	298	<21	54	166	6.2	NA	42.1	36	50
48R-1, 111–119	15	253.51	1	108	Gabbro with feldspathic infiltration	Gabbro	48.81	29.18	3.11	4.25	0.04	13.09	2.59	0.03	<0.03	0.10	101.21	0.88	0.09	1.09		<115	<21	132	26	1.6	NA	3.3	<32	<14
51R-2, 50–53	1A	268.33	1	118	Olivine-bearing gabbro	Olivine gabbro	46.50	17.56	7.75	12.93	0.12	11.04	1.80	0.03	0.04	0.23	98.00	2.68	<0.04	2.35	534	280	<21	81	111	8.4	NA	27.4	70	15
51R-4, 0–12	1	270.68	1	120	Gabbro	Gabbro	51.51	16.01	5.98	11.06	0.11	14.36	2.11	0.02	<0.03	0.31	101.47	1.14	<0.04	0.85	362	142	<21	86	187	13.1	NA	47.0	38	<14
53R-1, 52–59	7	276.92	1	122	Gabbro	Gabbro	52.88	17.01	5.63	10.61	0.11	14.77	2.18	0.02	<0.03	0.30	103.54	0.81	<0.04	0.97	734	154	<21	78	178	12.8	NA	45.2	35	54
54R-3, 58–66	3	284.47	1	128	Troctolite and olivine gabbro	Troctolite	45.48	9.72	9.21	29.63	0.13	7.80	0.20	0.07	0.05	0.10	102.39	7.36	0.09	8.45	2655	1338	<21	22	62	5.2	NA	18.4	118	99
54R-3, 82–85	4	284.71	1	128	Troctolite and olivine gabbro	Troctolite	40.71	8.02	10.37	36.76	0.15	2.78	0.09	0.02	0.04	0.02	98.97	9.58	0.13	10.58	2982	1624	<21	9	31	<1.5	NA	5.2	141	66
55R-3, 81–87	11	289.73	1	131	Olivine gabbro	Olivine gabbro	50.41	16.67	5.76	10.00	0.12	14.04	2.02	0.02	<0.03	0.33	99.37	0.75	<0.04	1.09	454	185	<21	74	164	16.2	NA	40.4	38	59
56R-2, 106–114	4B	292.96	1	134	Serpentinized troctolitic gabbro	Olivine gabbro	44.70	19.51	6.43	19.79	0.10	9.39	0.94	0.15	0.04	0.06	101.12	4.03	0.05	4.41	238	838	<21	69	24	<1.5	NA	5.5	80	43
56R-3, 93–100	9	294.27	1	136	Troctolite with pyroxene-rich domains	Ultramafic rocks	41.24	8.33	10.02	35.34	0.15	3.42	0.16	0.02	0.07	0.03	98.78	9.24	0.17	10.00	2422	1752	<21	16	28		NA	5.6	128	97
57R-2, 133–143	5A	298.31	1	137	Olivine-bearing gabbro	Olivine gabbro	53.29	13.76	5.71	13.28	0.13	15.76	1.59	0.01	0.03	0.31	103.87	0.82	<0.04	1.08	1149	242	<21	60	201	16.3	NA	53.2	<32	86
59R-3, 99–109	1A	308.99	1	146	Olivine-bearing gabbro	Gabbro	49.65	17.35	4.54	9.02	0.10	14.94	2.41	0.03	0.03	0.28	98.35	1.06	<0.04	0.86	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
60R-2, 40–47	3	311.73	1	147	Wehrlite	Ultramafic rocks	42.59	4.69	11.01	41.45	0.15	0.94	0.04	<0.01	0.05	0.03	100.97	11.11	0.13	12.54	2571	2311	<21	<5	36	4.6	NA	7.6	137	50
60R-3, 56–64	5	313.39	1	147	Ultramafic rocks (troctolitic gabbro)	Ultramafic rocks	42.43	6.56	9.90	34.23	0.12	5.71	0.10	<0.01	0.05	0.07	99.18	8.91	0.05	9.74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
64R-2, 82–87	8	331.25	1	167	Dunite	Peridotites	41.68	0.89	15.00	42.14	0.12	<0.06	0.05	<0.01	0.06	0.06	100.00	12.52	0.20	14.94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
66R-3, 33–36	6	342.13	1	173	Dunite (with plagioclase)	Ultramafic rocks	41.19	5.88	13.44	35.81	0.16	2.30	0.08	0.02	0.06	0.04	99.00	9.43	0.05	11.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
68R-3, 47–60	5	351.75	1	178	Gabbro	Gabbro	51.00	18.45	4.82	9.06	0.09	14.14	2.57	0.03	0.03	0.23	100.42	1.04	<0.04	0.74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
69R-1, 66–72	6	353.86	1	178	Oxide gabbro	Oxide gabbro	36.20	9.29	29.21	5.95	0.33	8.77	1.70	0.03	0.03	6.49	98.00	–1.05	<0.04	0.73	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
70R-2, 43–53	1B	359.12	1	183	Olivine-rich gabbro/troctolite	Olivine gabbro	41.74	NA	9.85	26.48	0.13	7.02	0.73	0.01	0.04	0.04	86.05	7.36	0.05	8.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
72R-1, 72–81	1C	368.32	1	185	Gabbro	Gabbro	47.48	22.12	4.93	11.32	0.08	14.47	1.48	0.03	0.03	0.16	102.10	1.74	<0.04	1.79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
73R-2, 75–85	6	374.6	1	193	Olivine gabbro	Olivine gabbro	46.30	18.45	6.78	14.33	0.11	12.51	1.26	0.03	0.00	0.19	99.96	2.05	0.23	2.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
74R-1, 105–113	7	378.25	1	196	Olivine gabbro	Olivine gabbro	52.53	16.07	6.83	11.96	0.14	11.85	2.36	0.03	0.02	0.28	102.04	0.30	<0.04	0.87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
76R-1, 93–102	4	387.83	1	204	Olivine-rich gabbro	Olivine gabbro	42.46	12.78	6.30	19.41	0.10	11.77	0.76	0.03	0.00	0.15	93.77	2.34	<0.04	2.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
77R-4, 41–48	2	395.73	1	207	Olivine-rich gabbro/troctolite	Olivine gabbro	44.56	10.50	7.58	23.00	0.12	10.24	0.60	0.01	0.02	0.16	96.80	3.10	<0.04	3.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes: * = Samples were analyzed with 1 = Meinhard nebulizer, 2 = V-groove nebulizer, 3 = miramist nebulizer, 4 = Meinhard nebulizer (duplicate analyses), 5 = Meinhard and V-groove nebulizers (duplicate analyses), 6 = Meinhard and miramist nebulizers (duplicate analyses). Limit of detection, precision, and accuracy of chemical analyses are given in the **“Methods”** chapter. NA = not applicable (not analyzed).