

MS 0405-102, Table T8. Analytical reproducibility and accuracy of ICP-AES data during Expedition 304.

Standard	Date	Nebulizer	Sample	Major element oxides (wt%)										Trace elements (ppm)													
				SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	MnO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	TiO ₂	Total	Cr	Ni	Ba	Sr	V	Y	Zr	Sc	Co	Nb	Cu		
ROA-3	1 Dec 2004	V-Groove	1	49.67	8.25	9.53	22.30	0.18	7.75	0.80	0.01	0.05	0.69	99.22	2259	1276	3.74	37.84	182.90	13.82	43.63	NA	64	1.26	31.17		
			2	48.86	8.18	8.63	24.30	0.16	7.47	0.77	0.01	0.05	0.68	99.11	2224	1451	3.04	37.27	199.39	14.60	40.28	NA	64	1.28	30.83		
	4 Dec 2004		1	48.65	7.32	8.09	21.41	0.15	6.70	0.69	0.00	0.02	0.58	93.62	2202	851	2.65	37.31	184.39	13.60	41.69	26.88	77	1.70	NA		
			2	44.88	7.16	7.78	22.73	0.14	6.37	0.73	0.00	-0.03	0.64	90.39	2137	548	5.26	35.57	172.48	12.53	41.96	27.23	77	1.71	NA		
			Averages:	49.34	7.93	8.50	22.69	0.16	7.07	0.75	0.01	0.02	0.65	2206	1031	3.67	37.00	184.79	13.64	41.89	27.06	70	1.49	31.00			
			Certified values:	49.34	7.93	8.72	24.71	0.15	7.59	0.84	NA	NA	0.72	1901	1171	1.20	36.00	191.70	13.00	35.00	28.00	71	0.1	65.78			
	BAS-140	1 Dec 2004	V-Groove	1	50.30	13.62	11.01	8.53	0.20	12.04	1.66	0.01	0.03	0.95	98.35	224	90	2.99	46.28	353.78	29.67	47.47	NA	73	1.14	30.20	
				2	52.09	15.29	11.56	8.63	0.20	12.89	1.91	-0.01	0.08	1.00	103.64	229	89	3.29	48.86	361.37	30.78	48.29	NA	73	1.09	5.09	
		2 Dec 2004		1	50.74	14.46	11.42	8.31	0.19	12.46	1.84	0.01	0.06	1.02	100.51	211	89	4.40	48.00	310.76	28.91	47.93	48.07	64	5.01	NA	
				2	43.95	12.74	11.78	7.44	0.20	11.21	1.45	0.02	0.02	0.87	89.68	119	248	28.19	49.73	342.58	28.84	47.93	46.68	101	1.83	NA	
4 Dec 2004			1	45.63	12.33	11.26	7.40	0.18	10.07	1.58	0.01	-0.02	0.76	89.20	129	259	9.11	49.60	319.35	27.82	48.44	37.54	100	1.84	NA		
			2	48.54	13.69	11.40	8.06	0.19	11.73	1.69	0.01	0.04	0.92	182	155	9.60	48.49	337.57	29.20	48.01	47.37	82	2.18	17.65			
			Averages:	50.58	14.62	11.12	8.16	0.19	12.42	1.84	0.01	0.08	0.98	186	84	NA	45.25	336.50	25.60	46.40	41.85	55	0.50	82.75			
			Certified values:	3.63	1.10	0.32	0.54	0.00	0.72	0.20	0.01	0.03	0.06	52	79	12.33	1.47	22.29	0.90	0.34	0.98	16	1.86	17.76			
BIR-1		1 Dec 2004	V-Groove	1	47.48	15.39	10.92	8.92	0.18	12.92	1.73	0.02	-0.02	0.89	98.43	323	261	8.12	107.99	307.91	14.29	17.33	NA	70	1.15	36.02	
				2	47.07	15.63	11.65	9.86	0.18	12.78	1.79	0.02	0.03	0.98	99.99	496	-36	8.71	107.64	321.74	16.17	16.73	43.40	63	5.28	NA	
	2 Dec 2004		1	47.23	12.50	10.43	9.04	0.17	11.21	1.72	0.02	-0.02	0.90	93.19	353	270	8.69	112.02	316.25	16.54	20.17	36.75	102	1.82	65.01		
			2	47.26	14.51	11.00	9.27	0.18	12.30	1.75	0.02	0	0.92	391	165	8.51	109.21	315.30	15.67	18.08	40.07	78	2.75	50.51			
			Averages:	47.60	15.38	11.21	9.63	0.17	13.20	1.81	0.03	0.02	0.95	370	170	7.00	110.00	310.00	16.00	18.00	44.00	52	0.60	125			
			Certified values:	0.21	1.74	0.61	0.51	0.01	0.95	0.04	0.00	0.03	0.05	92	174	0.33	2.43	6.96	1.21	1.84	4.70	21	2.22	20.50			
	BHVO-2	2 Dec 2004	V-Groove	1	48.13	13.32	12	7.39	0.17	11.34	2.20	0.51	0.24	2.66	97.91	347	48	121.37	391.65	321.22	25.95	17.40	32.37	68	15.67	NA	
				2	48.13	13.32	11.96	7.39	0.17	11.34	2.20	0.51	0.24	2.66	347	48	121.37	391.65	321.22	25.95	17.40	32.37	68	15.67	NA		
				Averages:	49.78	13.47	12.27	7.21	0.17	11.37	2.21	0.52	0.27	2.72	280	119	130.00	389.00	317.00	26.00	17.20	32.00	65	18.00	127.00		
				Certified values:	1.66	0.15	0.31	-0.17	0.00	0.03	0.01	0.03	0.07	0.07	-67.17	70.98	8.63	-2.65	-4.22	0.05	1.6	-0.37	-22.89	2.33			
DTS-1		2 Dec 2004	V-Groove	1	39.75	0.16	8.31	45.97	0.12	0.06	0.00	0.00	0.11	0.02	94.50	2247	-5593	3.21	3.52	8.17	0.15	4.32	10.53	50	-0.77	NA	
				2	39.75	0.16	8.31	45.97	0.12	0.06	0.00	0.00	0.11	0.02	2247	-5593	3.21	3.52	8.17	0.15	4.32	10.53	50	-1	NA		
				Averages:	40.74	0.19	8.75	50.00	0.12	0.17	0.01	0.01	0.00	0.01	3990	2360	1.70	0.32	11.00	0.04	4.00	3.50	140	2.2	7.10		
				Certified values:	0.99	0.03	0.45	4.02	0.00	0.11	0.01	0.01	-0.11	-0.02	1742.53	7953.00	-1.51	-3.20	2.83	-0.11	-0.32	-7.03	90.49	2.97			
		ROA-3	10 Dec 2004	Miramist	1	48.81	7.99	9.18	25.94	0.16	7.51	0.87	0.02	0.02	0.72	101.23	2009	1102	2.26	35.21	178.14	12.32	42.11	30.52	59.60	1.76	54.62
					2	47.51	8.07	8.84	25.15	0.16	7.38	0.85	0.01	0.03	0.70	98.70	2034	1126	9.73	35.00	176.89	13.48	41.77	28.18	55.38	1.52	56.77
	14 Dec 2004			1	46.30	8.25	8.47	26.29	0.15	7.55	0.90	0.02	NA	0.66	98.58	NA	NA	NA	NA	NA	NA	NA	29.03	NA	NA	54.92	
				2	46.89	8.16	8.71	25.48	0.15	7.91	0.84	0.00	0.05	0.69	98.87	2047	1084	4.41	37.02	186.74	10.17	38.94	29.70	76.23	3.62	54.13	
				Averages:	46.59	7.89	8.91	25.44	0.15	7.53	0.78	0.00	0.04	0.68	98.02	2147	1089	4.49	38.10	185.42	13.86	42.57	28.89	75.20	0.93	56.62	
				Certified values:	49.34	7.93	8.72	24.71	0.15	7.59	0.84	NA	NA	0.72	1901	1171	1.20	36.00	191.70	13.00	35.00	28.00	70.59	0.100	65.78		
BAS-140	10 Dec 2004		Miramist	1	51.43	14.37	11.37	8.33	0.20	12.22	1.80	0.01	NA	1.02	100.75	NA	NA	NA	NA	NA	NA	NA	48.56	NA	NA	89.12	
				2	55.42	14.68	12.25	8.67	0.20	13.31	1.97	0.01	NA	1.07	107.58	NA	NA	NA	NA	NA	NA	NA	49.76	NA	NA	91.07	
				Averages:	53.43	14.52	11.81	8.50	0.20	12.76	1.89	0.01	NA	1.05	183	78	4.04	47.52	326.84	34.41	45.48	47.49	60.80	-0.75	79.86		
				Certified values:	50.58	14.62	11.12	8.16	0.19	12.42	1.84	0.01	0.08	0.98	186	84	NA	45.25	336.50	25.60	46.40	41.85	55.00	0.5	82.75		
	BIR-1	14 Dec 2004	Miramist	1	46.94	15.66	11.38	10.06	0.17	13.33	1.78	0.02	0.02	0.94	100.32	418	158	10.05	108.91	315.56	16.10	16.64	43.47	63.02	1.11	125.19	
				2	46.94	15.66	11.38	10.06	0.17	13.33	1.78	0.02	0.02	0.94	418	158	10.05	108.91	315.56	16.10	16.64	43.47	63.02	1.11	125.19		
				Averages:	47.60	15.38	11.21	9.63	0.17	13.20	1.81	0.03	0.02	0.95	370	170	7.00	110.00	310.00	16.00	18.00	44.00	52.00	0.6	125.0		
				Certified values:	0.65	-0.28	-0.17	-0.43	0.00	-0.13	0.03	0.01	0.00	0.01	-48.00	11.85	-3.05	1.09	-5.56	-0.10	1.36	0.53	-11.02	-0.51	-0.19		
		BHVO-2	10 Dec 2004	Miramist	1	49.49	13.10	12.83	7.13	0.18	10.99	2.11	0.50	0.15	2.79	99.27	294	110	122.14	395.72	309.72	25.06	202.95	32.90	56.94	-1.18	135.31
					2 (U)	50.05	13.10	12.76	7.07	0.18	11.21	2.15	0.47	0.14	2.80	99.92	292	108	120.67	393.53	303.05	24.14	175.92	31.92	68.98	1.64	137.40
14 Dec 2004				1	47.68	12.78	12.38	7.13	0.17	10.86	2.12	0.42	0.15	2.77	96.47	308	113	125.74	389.60	309.42	21.01	192.85	30.54	65.74	1.53	130.70	
				2	50.19	13.27	12.63	7.25	0.18	11.60	2.21	0.49	0.14	2.70	100.66	296	110	129.19	380.63	307.63	23.74	197.84	32.30	54.73	1.58	139.19	
				Averages:	49.78	13.14	12.70	7.19	0.18	11.22	2.17	0.48	0.15	2.76	297	110	124.43	389.87	307.46	23.49	192.39	31.91	61.60	0.89	135.65		
				Certified values:	49.78	13.47	12.27	7.21	0.17	11.37	2.21	0.52	0.27	2.72	280	119	130.00	389.00	317.00	26.00	17.20	32.00	65.00	18			