

Element	Mg	Sc	Ti	V	Cr	Fe	Sr	Y	Zr	Nb	Mo	Sn	Sb	Ba	Hf	Ta	W	Pb*	Th	U	Nb/Ta	Zr/Hf	Zr-in-rutile thermometry			
																							Z	W		T
AR-09-15																										
hb_1	1025.40	2.05	587518.31	1386.29	111.65	19934.40	1.70	0.68	128.00	230.72	3.50	14.92	6.19	0.13	5.46	11.75	35.54	0.08	0.05	4.43	19.64	23.44	610.09	577.98	585.89	
hb_2	3932.84	4.43	587518.25	1399.52	111.39	31799.31	2.19	1.48	134.28	124.30	3.10	11.45	3.75	0.48	5.66	8.20	28.14	0.05	0.01	2.45	15.16	23.72	616.21	581.36	589.24	
hb_3	285.93	1.79	587518.31	1221.63	88.80	15981.92	1.61	0.13	138.46	116.37	3.45	12.28	3.66	0.10	5.28	6.00	20.66	0.06	0.01	3.17	19.40	26.22	620.13	583.54	591.40	
hb_4	234.82	2.74	587518.25	1670.40	79.04	13162.32	1.50	0.15	128.15	123.51	3.27	12.08	5.14	0.09	5.05	8.57	29.40	0.07	0.02	2.89	14.41	25.38	610.24	578.06	585.97	
hb_5	262.23	2.81	587518.25	1462.65	133.53	20720.98	1.96	0.11	159.51	121.13	3.93	13.90	3.41	0.85	5.96	8.07	24.03	0.05	0.02	2.55	15.01	26.76	638.22	593.75	601.50	
hb_6	250.91	2.56	587518.31	1332.77	117.11	15513.39	1.91	0.11	193.18	128.36	3.52	11.17	2.13	0.55	5.75	8.21	34.12	0.04	bdl	0.27	15.63	33.60	662.69	607.96	615.56	
hb_7	258.85	2.23	587518.25	1420.96	106.49	10196.56	1.99	0.26	125.11	149.71	3.52	13.53	5.19	0.76	5.52	10.83	38.13	0.09	0.04	3.06	13.82	22.66	607.17	576.37	584.30	
hb_8	236.97	2.64	587518.25	1297.63	102.92	10774.00	1.67	0.13	172.63	132.57	3.49	12.39	2.03	0.34	5.80	9.57	20.99	0.03	bdl	0.16	13.85	29.76	648.32	599.56	607.25	
hb_9	245.93	2.23	587518.25	1217.79	135.67	11729.17	1.39	0.07	171.83	127.64	2.83	14.29	5.08	bdl	5.60	8.16	20.27	bdl	0.00	0.14	15.64	30.68	647.72	599.21	606.91	
hb_10	242.65	3.30	587518.19	1479.28	135.87	11059.15	1.56	0.12	181.02	137.20	3.11	12.41	2.49	0.26	5.88	7.04	12.54	0.02	0.01	0.29	19.49	30.79	654.38	603.08	610.74	
hb_11	245.82	1.94	587518.25	1325.85	97.17	9940.06	1.72	0.18	149.30	176.70	3.63	14.79	3.52	0.76	6.15	10.35	10.49	0.10	0.01	2.33	17.07	24.28	629.76	588.95	596.75	
hb_12	232.76	2.24	587518.25	1276.21	96.32	10882.10	1.73	0.11	174.21	149.52	3.18	10.36	2.37	0.89	6.00	9.09	4.25	0.06	0.00	2.02	16.45	29.04	649.48	600.23	607.92	
																						633±14	591±14	599±14		
																						0.6	0.2	0.2		
AR-09-08																										
hc_1	430.56	3.41	587518.06	2437.53	122.04	6581.57	1.27	0.18	137.71	29.08	3.93	10.28	16.80	0.23	5.15	1.42	58.60	0.06	0.05	1.52	20.48	26.74	619.43	583.15	591.01	
hc_2	280.28	11.36	587518.19	3674.41	192.02	25187.87	2.49	1.36	159.15	141.19	5.52	11.90	14.01	1.32	6.79	8.69	83.97	0.16	0.07	2.58	16.25	23.44	637.93	593.58	601.34	
hc_3	244.06	4.05	587518.19	1717.96	41.17	7991.77	1.21	0.10	162.97	117.67	4.02	9.14	2.30	bdl	4.98	7.24	85.53	0.03	bdl	1.47	16.25	32.72	640.96	595.32	603.06	
hc_4	240.89	4.41	587518.19	1635.19	42.62	6715.56	1.43	0.16	166.86	114.77	4.12	8.77	1.53	0.15	5.47	6.97	79.15	0.01	bdl	1.00	16.47	30.50	643.97	597.05	604.77	
hc_5	265.74	3.15	587518.19	1834.21	47.61	6933.79	1.37	0.14	144.00	141.09	5.25	9.90	5.13	0.23	5.73	10.13	79.87	0.06	0.11	2.97	13.93	25.13	625.14	586.34	594.17	
hc_6	296.59	3.40	587518.19	2056.48	90.36	16101.27	1.29	0.10	185.35	599.61	2.43	7.10	3.05	bdl	5.69	71.23	80.12	0.03	bdl	1.45	8.42	32.57	657.40	604.85	612.49	
hc_7	243.70	6.92	587518.25	3262.89	94.08	5980.70	1.06	0.08	162.86	110.57	4.36	8.71	0.76	bdl	5.10	6.63	107.44	0.03	bdl	0.87	16.68	31.93	640.87	595.27	603.01	
hc_8	251.26	7.64	587518.25	3402.61	80.97	4967.07	1.42	0.10	157.93	111.45	4.00	8.67	0.97	0.17	5.36	6.88	108.08	0.10	bdl	1.24	16.20	29.46	636.94	593.02	600.79	
hc_9	253.33	4.66	587518.25	2379.68	11.66	4327.99	1.14	0.15	129.23	139.28	4.71	11.90	18.88	bdl	5.94	8.58	92.95	0.05	0.02	2.16	16.23	21.76	611.31	578.65	586.55	
hc_10	263.38	10.74	587518.25	2786.07	155.43	5271.71	1.10	0.08	155.71	120.16	3.97	8.60	2.72	bdl	5.56	7.74	103.15	0.04	bdl	1.87	15.52	28.01	635.13	591.99	599.77	
hc_11	252.38	13.47	587518.25	2733.86	356.32	4134.87	1.21	0.10	155.00	117.45	4.76	9.80	4.07	bdl	5.60	6.47	101.44	0.03	0.01	1.90	18.15	27.68	634.55	591.66	599.44	
hc_12	253.97	6.81	587518.25	2645.85	114.43	5734.10	1.35	0.13	118.58	126.52	4.41	11.41	10.92	bdl	4.28	7.10	116.38	0.04	0.08	1.72	17.82	27.71	600.32	572.63	580.59	
																						632±14	590±14	598±14		
																						0.4	0.1	0.1		

bdl: below detection limit.

Internal standardisation was done stoichiometrically by assuming TiO2 = 98% in rutile.

Pb* is radiogenic lead calculated assuming no 204Pb, no 208Pb and a 207Pb/206Pb ratio of approximately 0.05

For the Zr-in-rutile thermometry: Z= Zack et al. (2004); W= Watson et al. (2006) and T= Tomkins et al. (2007). In the Tomkins' equation, pressure was set to 10kbar.

Weighted mean temperatures (in bold) were calculated using the loopplot program (Ludwig 2002), attributing an error of ±25°C to each value. The resulting MSWD value is indicated in italics.