

UWA SHRIMP LOG SHEET

Date 18/12/06 **UWA mount no(s)** 06-23
98-54 **Mineral(s)** Rutile **Whose sample?** Me N **Operator(s)** MeN + CM + Nick

Notes: Masses in **bold** = peak centred; others = offset from lower mass centred peak (see offsets below).

Zircon/Badd.	196	204	204.1	206	207	208	238	248	254
Count time (secs)	2	10	10	10/20	30/10	10	5	5	2
Delay time (secs)	8	3	1	4	2	1	3	2	2
Centring (secs)	3	-	-	3	-	-	3	3	2

Rutile

Titanite/Perovskite	200	204	204.1	206	207	208	248	254	270
Count time (secs)	2	10	10	10/20	30/10	10	5	5	7
Delay time (secs)	8	3	1	4	2	1	4	2	3
Centring (secs)	3	-	-	4	-	-	4	3	3

Ti304
207.9
3
1
4

Monazite (SHB)	202	203	204	204.1	206	207	208	232	254	264	270
Count time (secs)	2	2	10	10	10/20	30/10	5	5	2	2	2
Delay time (secs)	8	1	1	1	4	2	2	4	3	3	2
Centring (secs)	1	2	-	-	4	-	2	2	2	2	2
Cup in/out (SHA) out								in	out	in	

Xenotime (SHB)	194	(196)	204	204.1	206	207	208	238	248	254
Count time (secs)	2	(5)	10	10	10/20	30/10	5	5	5	2
Delay time (secs)	8	(2)	3	1	4	2	1	3	2	2
Centring (secs)	1	-	-	-	4	-	-	4	3	2

MASS OFFSETS (record setup offsets for session, and **check them after each analysis**).

Note: Setup offsets are different for SHRIMP A and B: i.e. 206-207 = 1.001 for A and 1.005 for B.

Zircon/Badd.	196-204	204-204.1	204-206	206-207	206-208	
Expected offsets:	8.170	0.045	~2.001/9	1.001/5	2.001/9	
Setup offsets:	8.162	0.045	~2.009	1.004	2.007	
Titanite/Perovsk.	200-204	204-204.1	204-206	206-207	206-208	
Expected offsets:	4.136	0.045	~2.001/9	1.001/5	2.001/9	
Setup offsets:		0.045	~2.009	1.004	2.007	
Monazite (SHB)	202-203	203-204	204-204.1	204-206	206-207	206-208
Expected offsets:	~1.000	1.110	0.045	~2.001/9	1.001/5	~2.001/9
Setup offsets:						
Xenotime (SHB)	(194-196)	194-204	204-204.1	204-206	206-207	206-208
Expected offsets:	1.998	10.143	0.045	~2.001/9	1.001/5	2.001/9
Setup offsets:						

192-204 =
12.100

202-204 = 2.001

Deadtime 24 ns **Kohler aperture** 100 **Retard** 13.9 volts **Resoln** 5474

Primary on Steel: O⁻ 8.3 nA / -2882 bits & nA O₂⁻ 2.64 nA / -2051 bits & nA

Primary O₂⁻ on: epoxy = 2.85 nA; standard = 3.8 nA; **PESABM** on std = 120 pA

Raster: Time (mins): 2.5 Aperture: 120 **No. of scans:** 6

Useful information

CZ3 = 564 Ma & 551 ppm U
 Temora 2 = 417 Ma & ~130 ppm U
 Khan = 518 Ma & 700 ppm U
 SDA : 7/6 age = 3578 +/- 4 Ma
 BR266 : 559 Ma & 903 ppm U

MONAZITE

French = 514 Ma & 1000 ppm U
 PD95 7/6 age = 1698(?) Ma
 Z2908 7/6 age = 1795(?) Ma
 QMa = 505(?) Ma

XENOTIME

MG1 = 490(?) Ma
 BS1 = 507(?) Ma
 Xenol = 994 Ma & 7/6 age = 997 Ma

Note: Bold = constant for stds & unknowns.....check after each analysis; also check offsets.

Sample/Std ID	Time on printout	UO/U 254/238	196 (zr) Kcps	206 cps	U ppm	f ₂₀₆ %	Sensit.	Age+/-1σ (Ma) 206/238	207/206	Offsets OK?
Alternative		UO2/UO 270/254	194 (xt) 200 (mf) 203 (mz) 207.9 (Ti304)	206 cps	254 270 Kcps	204 cps cts	196/194 264 Kcps	206/238 206/254 206/270	207/206	Check after each!!!

9854	WH.1-1	11:48	0.87	29.8K	111K	19.9K	25	5.59	0.176	✓
	WH.1-2	12:16	0.93	29.4K	123K	22.1K	12	5.59	0.174	✓
	WH.1-3	12:45	0.86	29.7K	99.6K	17.9K	15	5.54	0.177	✓
0623	B.1-1	13:14	1.19	50.8	91.6	16.7	24	5.47	0.185	✓ Checked + drifted Mass Scan + reset offsets.
	B.2-1	13:37	-	no print out			-			
Changed run table → deleted '196'										
	WH.1-4	14:36	0.78	29.7	67.3K	12.5	7	5.37	2624±7	✓
changed run table → use 192 instead of 207.9										

~~WH.1-5~~

SAMPLE	TIME	270/254	192	206	270	204		206/238 270	207/206	
			cps	cps	cps	cps		Age/ma	Age/ma	
WH.1-5	15:54	0.875	3200	9700	10000	0.25		2640±46	2657±36	✓
WH.1-6	16:16	0.871	3100	9200	9900	.32		2548±55	2626±41	✓
0623 B.3-1	16:50	0.756	4200	5700	6000	.05		2358±54	2653±29	✓
B.4-1	17:14	0.752	4100	5800	6300	.21		2245±51	2680±7	✓
B.5-1	17:27	high	204, aborted.							✓
B.6-1	17:47	0.733	4000	7800	8200	.60		2260±46	2658±31	✓
WH.1-7	18:14	0.883	3200	8600	8500	.18		2638±48	2639±5	✓
B.7-1	18:43	1.43	1500	11000	10000	.47		3025±52	2676±6	✓
B.7-2	19:11	1.35	1600	11000	10000	.49		3029±50	2681±6	✓
B.8-1	19:34	1.247	1800	6200	5500	.55		3027±81	2667±7	✓

238-248 → 9.990

WH.1-4

Note: Bold = constant for stds & unknowns.....check after each analysis; also check offsets.

Sample/ Std ID	Time on printout	UO/U 254/238	196 (zr) Kcps	206 cps	U ppm	f ₂₀₆ %	Sensit.	Age+/-1σ (Ma) 206/238 207/206	Offsets OK?
Alternative		UO2/UO 270/254	194 (xt) 200 (mt) 203 (mz) 192	206 cps 206	254 270 Kcps 270	204 cps 204	196/194 264 Kcps 206/238	206/238 207/206 207/206	Check after each!!!
9854 mislabeled WH.1-8	20:00	0.929	3100	9700	10000	.19		2522±55 2639±30	✓
B.9-1	20:25	1.145	2100	6400	6500	.36		2858±76 2664±7	✓
B.10-1	20:48	0.758	4000	5300	5400	0.42		2298±55 2661±31	✓
B.11-1	21:00	High 206, aborted.							
B.12-1	22:21	0.815	4000	5800	6100	.92		2428±66 2660±51	✓
B.13-1	21:43	0.73	4900	5800	6400	.97		2178±57 2620±42	✓
WH.1-9	22:09	0.911	3100	9300	9500	.32		2598±51 2606±21	✓
B.14-1	22:19	high 206, aborted							
B.15-1	22:40	1.62	1000	15000	13000	.76		3067±73 2729±4	✓
B.15-2	23:05	1.63	910	13000	11500	.50		2951±76 2682±13	✓
WH.1-10	23:27	1.029	2700	11000	11200	.36		2710±74 2640±43	✓
B.16-1	23:56	1.66	910	7800	7000	.58		3069±123 2714±15	✓
B.17-1	00:17	1.33	1300	3700	3300	.55		3091±86 2646±11	✓
B.18-1	00:39	0.86	2800	5200	5000	.52		2639±62 2652±33	✓
WH.1-11	01:08	0.999	2700	8900	9000	.32		2669±45 2600±21	✓
B.19-1	01:33	1.36	1100	1700	1600	.37		3058±44 2720±11	✓
B.20-1	01:58	1.63	690	7200	7000	.24		292±106 2720±82	✓
B.21-1	02:20	1.27	1100	8100	7400	.59		2999±107 2676±57	✓
WH.1-12	02:30	high 206, aborted.							✓
WH.1-13	02:49	0.969	3100	10000	10000	.33		2779±65 2633±40	✓
B.22-1	03:14	0.711	4000	4800	4800	.42		2223±38 2689±32	✓

12-15

Note: Bold = constant for stds & unknowns.....check after each analysis; also check offsets.

Sample/ Std ID	Time on printout	UO/U 254/238	196 (zr) Kcps	206 cps	U ppm	f ₂₀₆ %	Sensit.	Age+/-1σ (Ma) 206/238 207/206	Offsets OK?	
Alternative		UO2/UO 270/254	194 (xt) 200 (tnt) 203 (mz) 192	206 cps	254 270 Kcps	204 cps 206	196/194 264 Kcps	206/238 206/254 206/270 6138	207/206 716	Check after each!!!
B.23-1	03:35	1.45	880	23000	23000	.37		3158 ± 117	2685 ± 24	✓
B.24-1	03:58	1.45	1200	12000	10000	.37		3111 ± 71	2663 ± 12	✓
B.25-1	04:20	0.965	2700	9000	8500	.22		2741 ± 37	2669 ± 5	✓
B.26-1	04:42	0.937	2880	5900	6000	.23		2536 ± 63	2625 ± 8	✓
WH.2-1	05:06	0.709	9000	8600	9000	.31		2274 ± 57	2587 ± 36	✓
WH.2-2	05:26	0.732	6000	9100	8500	.31		2386 ± 83	2620 ± 83	✓
B.27-1	05:51	1.736	760	13000	11300	0.52		3000 ± 115	2692 ± 5	✓
B.28-1	06:13	0.772	3400	4500	4600	.25		2616 ± 84	2684 ± 74	✓
B.29-1	06:34	0.758	4900	6600	6500	.38		2448 ± 82	2694 ± 69	✓
B.30-1	06:57	1.52	1300	10000	9000	.18		3108 ± 59	2706 ± 7	✓
WH.2-3	07:22	0.726	3000	6000	6300	.15		2428 ± 52	2591 ± 35	✓
B.31-1	07:46	0.877	3100	7600	7500	.51		2580 ± 37	2668 ± 7	✓
B32-1	08:10							3136 ± 55	2719 ± 4	