

UWA SHRIMP LOG SHEET

Date 18/3/05 **UWA mount no(s)** 04-84 **Mineral(s)** Zircon **Whose sample?** RJB (UV) **Operator(s)** MB

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)	10	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

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

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:	8.167	0.045	2.001	1.003	2.002	
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:						
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:						

Deadtime 24 ns **Kohler aperture** 50 *badly blown out* **Retard** - volts **Resoln** - 4780

Primary on Steel: O⁻ bits & nA O₂⁻ bits & nA

Primary O₂⁻ on: epoxy = 3.2 nA; standard = 4 nA; **PESABM on std** = 56 pA

Raster: Time (mins): 2.0 Aperture: 120 No. of scans: 6

Useful information **Comments:**
 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

Wasted until 3pm trying to settle magnet, then AK realised he had forgotten to switch data acquisition program back to +ve polarity after using Cs-source -> problem solved.

Some concern about nearby young (ie 2620 Ma) analyses -> peak shapes all look good though? (see printed peak shapes)

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)	206 cps	254 270 Kcps	204 cps	196/194 264 Kcps	206/238 206/254 206/270	207/206	Check after each!!!

C23.1-1	14:59	6.13	42	26	550	2	£	564±3	495±25	✓
C23.1-2	15:17	6.29	41	27	561	1	19	564±4	552±18	✓
0484B.33-1	15:39	6.57	39	111	450	0.25	19	2406±13	2517±5	✓
0484B.34-1	16:05	6.32	39	124	478	0.42	20	2449±12	2587±6	✓
C23.1-3	16:26	6.23	41	26	556	0.02	19	557±3	572±22	✓
0484B.35-1	16:52	6.47	41	160	637	0.75	-	2631±18	2649±4	✓
0484B.36-1	17:11	6.22	40	57	214	0.78	18.1	2654±11	2574±16	✓
0484B.37-1	17:30	6.37	40	89	342	0.08	19.3	2644±17	2640±8	✓
C23.1-4	17:50	6.31	42	27	551	0.03	19.1	573±3	491±20	✓
0484B.38-1	18:09	6.55	40	113	404	-	20.6	2642±15	2640±5	✓
0484B.39-1	18:27	6.54	41	92	333	0.22	19.1	2585±15	2591±8	✓
0484B.39-1	18:47	6.32	43	107	387	0.05	19.7	2654±14	2646±5	✓
C23.1-5	19:05	6.34	41	28	558	0.03	19.2	564±3	547±28	✓
0484B.40-1	19:28	6.46	42	81	314	0.61	20.6	2380±17	2624±9	✓
0484B.41-1	19:48	6.52	40	86	332	0.08	19.6	2637±21	2662±6	✓
0484B.42-1	20:10	6.57	38	87	344	0.15	18.8	2375±13	2519±6	✓
0484B.43-1	20:31	6.35	41	98	370	0.01	-	2636±20	2649±5	✓
C23.1-6	20:50	6.14	43	27	546	0.01	18.9	562±3	583±26	✓
0484B.44-1	21:08	6.02	43	70	267	0.10	-	2639±41	2655±7	✓
0484B.45-1	21:51	5.81	37	82	433	0.22	15.2	2301±16	2445±9	✓
0484B.46-1	22:31	6.13	43	103	370	0.08	19.4	2582±12	2643±6	✓

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Alternative		UO2/UO 270/254	194 (xt) 200 (tnt) 203 (mz)	206 cps	254 270 Kcps	204 cps	196/194 264 Kcps	206/238 206/254 206/270	207/206	Check after each!!!
04848.47-1	22:53	6.47	42	91	333	0.05	19.9	2568±4	2655±4	✓
C23.1-7	23:13	6.53	42	29	563	0.05	20.6	565±3	562±24	✓
SAMPLE CHANGE (had to load mount for tomorrow)										
C23.1-8	25:40	6.30	40	26	558	0.11	18.9	571±3	539±38	✓
04844.21-1	00:03	6.27	42	64	243	0.01	20.2	2544±22	2619±5	✓
04844.22-1	00:25	6.52	39	73	504	0.03	19.7	2530±15	2579±8	✓
04844.23-1	00:52	6.26	40	43	168	0.07	18.6	2617±18	2598±9	✓
C23.2-1	01:10	6.08	41	25	535	0.01	18.9	565±4	578±20	✓
04844.24-1	01:38	6.18	41	63	247	0.25	19.1	2559±17	2620±8	✓
04844.25-1	01:47	6.21	41	54	236	0.11	18.9	2573±17	2632±6	✓
04844.26-1	02:05	5.97	42	46	190	0.03	18.2	2583±17	2622±7	✓
04844.27-1	02:28	6.4	40	80	311	0.11	19.9	2592±14	2665±5	✓
C23.2-2	02:44	6.23	41	25	544	0.05	19.4	558±4	574±26	✓
04844.28-1	03:03	6.23	40	27	304	0.06	18.9	2621±26	2626±11	✓
04844.29-1	03:21	6.30	41	68	269	0.02	19.5	2554±15	2641±6	✓
04844.30-1	03:46	6.18	37	38	185	0.11	17.8	2488±27	2626±9	✓
C23.2-3	04:04	6.31	40	26	544	0.03	19.5	570±4	563±28	✓
04844.31-1	04:22	6.27	40	65	261	0.20	18.9	2578±25	2641±7	✓
04844.32-1	04:39	6.37	39	101	450	0.04	19.9	2408±10	2559±4	✓
04844.33-1	04:57	6.39	40	95	362	0.18	19.9	2572±18	2804±6	✓
04844.34-1	05:15	6.08	39	27	111	0.03	18.0	2659±23	2641±9	✓
C23.2-4	05:33	6.35	40	26	543	0.02	19.5	554±3	607±28	✓

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								206/238	207/206	
Alternative		UO2/UO 270/254	194 (xt) 200 (tnt) 203 (mz)	206 cps	254 270 Kcps	204 cps	196/194 264 Kcps	206/238 206/254 206/270	207/206	Check after each!!!
0484C.35-1	05:53	5.97	40	83	370	0.12	18.4	2341±16	2603±6	✓
0484C.36-1	06:25	6.12	41	80	331	0.11	18.8	2569±16	2627±6	✓
0484C.37-1	06:42	5.87	37	29	129	0.02	16.0	2568±26	2678±8	✓
0484C.38-1	07:00	6.22	41	36	137	0.04	19.2	2599±25	2622±9	✓
C23.2-5	07:17	6.13	41	27	546	0	19.1	572±3	548±20	✓
0484C.39-1	07:36	6.58	40	107	432	0.05	20.6	2423±15	2585±5	✓
0484C.40-1	07:56	6.09	42	25	97	0.03	19.0	2555±27	2644±10	✓
0484C.41-1	08:15	5.97	39	24	95	0.09	18.8	2552±28	2644±9	✓
0484C.42-1	08:32	5.93	42	65	237	0.24	20.5	2591±15	2644±8	✓