

UWA SHRIMP LOG SHEET

Date 11/9/06 **UWA mount no(s)** 06-37
06-23 **Mineral(s)** ZR **Whose sample?** McN **Operator(s)** McN + 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	84	2	23
Centring (secs)	3	-	-	84	-	-	82	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:	8.162	0.045	~2.008	1.004	2.006	
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 25 ns **Kohler aperture** 100% **Retard**volts **Resoln** 534.7.....

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

Primary O₂⁻ on: epoxy = 3.0 nA; standard = 4.2 nA; **PESABM** on std = 63 pA

Raster: Time (mins): 2.0 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

300KHz → 45% scale
 on 254 = 980 ppm U
 use < 10-12% scale

06-37 → BR266 x 8
 (6 SCANS) SDA x 2
 AYB

06-23 BR266 x 10
 (5 SCANS) SDA x 1 ?

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	194 (xt)	206	254	204	196/194	206/238 207/206	Check after each!!!
		270/254	200 (tnt)	cps	270	cps	264	206/254	
			203 (mz)		Kcps		Kcps	206/270	

* MISLABELED 'BR'
0637

BR. 1-1	11:18	5.01	22	4000	903	-	16.7	559 ± 3	568 ± 18	✓	
SDA* 1-1	Aborted - high 204									✓	
SDA* 1-2	11:43	5.00	23	5000	134	.01	17.1	3537 ± 28	3579 ± 7	✓	
SDA. 2-1	12:20	4.73	22	6100	187	-	16.1	3468 ± 22	3586 ± 5	✓	
BR. 1-2	12:39	5.44	21	4100	922	.02	19.2	539 ± 3	550 ± 16	✓	
B. 1-1	13:01	5.28	23	5100	305	.05	19.2	1941 ± 9	2136 ± 8	✓	
B. 2-1	13:13	Software bug stopped analysis after 1st scan. Fixed.									
B. 2-1	13:48	5.15	23	5200	279	.01	19.4	1917 ± 15	2123 ± 12	✓	
B. 3-1	14:07	5.53	22	5500	326	.26	20.0	1724 ± 13	2474 ± 11	✓	
BR. 1-3	14:29	5.46	19	3800	916	0	17.7	543 ± 3	579 ± 18	✓	
B. 4-1	15:02	5.03	28	2900	106	.04	18.4	2359 ± 19	2533 ± 13	✓	
B. 5-1	15:23	4.96	29	4400	183	.04	18.2	2095 ± 14	2419 ± 9	✓	
B. 6-1	15:49	4.95	30	11k	663	.11	19.6	1458 ± 8	1914 ± 8	✓	
BR. 1-4	16:10	5.03	25	4500	904	0	16.5	555 ± 3	600 ± 15	✓	
B. 7-1	16:33	5.27	25	6300	448	.26	18.4	1388 ± 18	1985 ± 26	✓	
B. 8-1	16:54	5.14	27	7800	336	.04	18.8	2079 ± 12	2174 ± 8	✓	
B. 4-2	17:20	4.99	27	1300	49	0	18.5	2430 ± 27	2574 ± 15	✓	
BR. 1-5	17:44	5.09	25	4400	853	.00	17.2	564 ± 2	565 ± 13	✓	
A. 1-1	18:11	4.74	28	2800	127	.04	17.4	2135 ± 18	2196 ± 13	✓	
A. 2-1	18:30	4.92	26	3400	114	.06	17.5	2753 ± 20	2769 ± 8	✓	
A. 3-1	18:52	4.36	29	4600	235	.03	16	2034 ± 13	2481 ± 10	✓	

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) Keps	206 cps	U ppm	f ₂₀₆ %	Sensit.	Age+/-1σ (Ma) 206/238	207/206	Offsets OK?
<i>Alternative</i>		UO2/UO	194 (xt)	206	254	204	196/194	206/238	207/206	Check after each!!!
		270/254	200 (tnt)	cps	270	cps	264	206/254		
			203 (mz)		Keps		Keps	206/270		
BR.1-6	19:11	4.74	27	4300	877	.03	16.2	557 ± 2	528 ± 14	✓
A.4-1	19:33	4.03	23	3300	155	.13	11.0	2907 ± 23	2781 ± 10	✓
A.5-1	20:04	4.94	27	3600	167	.07	17.3	2170 ± 15	2193 ± 10	✓
A.6-1	20:25	4.93	28	7500	334	.02	17.1	2059 ± 11	2180 ± 7	✓
A.7-1	20:44	4.99	27	3100	131	.11	18.8	2156 ± 14	2168 ± 12	✓
A.8-1	21:06	5.04	31	14000	731	.19	19.9	1557 ± 12	2231 ± 15	✓
A.9-1	21:28	4.95	29	7200	303	0	19.2	2058 ± 13	2196 ± 8	✓
BR.1-7	21:51	4.81	27	4200	838	0	17.1	556 ± 2	564 ± 13	✓
BR.1-8	22:14	4.37	21	3500	946	0	12.1	577 ± 3	584 ± 17	✓
Swap to		06-23 B.								
0623B.1-1	23:29	5.16	31	1200	254	.06	20	3195 ± 48	3647 ± 16	✓
0623B.2-1	23:56	4.85	28	12k	273	.01	16.8	3609 ± 17	3644 ± 5	✓
B.3-1	00:07	high	UO254	aborted.						✓
B.4-1	00:23	5.30	31	8300	293	.04	21.4	2094 ± 127	3583 ± 5	✓
B.5-1	00:44	4.95	32	7200	183	.02	19.6	2887 ± 16	3572 ± 5	✓
0623 BR.1-1	01:11	5.07	31	5100	846	0	18.6	541 ± 3	573 ± 18	✓
BR.2-1	01:31	5.01	30	5200	864	0	18.7	560 ± 4	561 ± 16	✓
BR.2-3	01:47	5.08	29	5100	874	0	18.2	561 ± 2	579 ± 14	✓
BR.6-1	02:04	5.21	31	14k	449	.14	19.7	2323 ± 90	3517 ± 12	✓
B.7-1	02:20	5.11 5.11	32	10k	337	.06	20.2	2258 ± 21	3562 ± 4	✓
B.8-1	02:36	4.92	30	10k	215	0	17.3	3519 ± 28	3614 ± 3	✓

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Sample/ Std ID	Time on printout	UO/U 254/238	196 (zr) Keps	206 cps	U ppm	f ₂₀₆ %	Sensit.	Age+/-1σ (Ma) 206/238	207/206	Offsets OK?
<i>Alternative</i>		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!!!
B.9-1	03:03	5-00	32	8900	169	.103	14.7	3594±21	3678±6	✓
B.10-1	03:18	5-08	31	2300	543	0	14.6	3106±13	3595±4	✓
(Low) B.11-1	03:32	High zoh, aborted.								
B.12-1	03:49	5-14	29	11k	417	.26	18	2132±20	3263±5	✓
B.13-1	03:58	High zoh, aborted.								
BR.2-3	04:17	4-85	31	5100	859	0	17.4	565±4	584±17	✓
BR.2-4 BR.2-4	04:32	4-68	32	5000	861	0	16.7	549±3	555±14	✓
B.14-1	04:55	4-71	32	4200	238	.02	18-2	2986±23	3625±3	✓
B.15-1	05:12	5-06	32	13000	347	.03	20-2	2745±14	3546±15	✓
B.16-1	05:28	5-11	31	7000	175	0	18-7	2901±24	3698±13	✓
B.17-1	05:54	5-22	33	4000	327	.02	20-6	1983±15	3362±6	✓
B.18-1	06:09	5-08	31	15k	610	.141	18-3	1954±5	3448±11	✓
BR.3-1	06:25	4-93	30	4900	828	.02	17-8	555±3	573±20	✓
BR.3-2	06:40	5-10	28	4900	854	.01	17-4	558±3	540±13	✓
BR.3-3	06:57	4-75	32	4800	802	0	17-4	555±3	568±14	✓
B.19-1	07:24	5-17	34	13k	765	.13	20-6	1286±5	2784±4	✓
B.20-1	07:43	5-09	32	15k	391	.06	20-5	2829±14	3520±3	✓
B.21-1	07:57	High zoh, aborted								
B.22-1	08:14	5-37	32	6400	111	.02	21-3	3597±28	3656±6	✓
BR.4-1	08:30									

FINISHED