

UWA SHRIMP LOG SHEET

Date	UWA mount no(s)	Mineral(s)	Whose sample?	Operator(s)
16/9/06	06-63 - Ben 06-69 - JK	Zr	McN	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	34	2	23
Centring (secs)	3	-	-	34	-	-	32	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:	8.163	0.045	~2.010	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:						
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 2.4 ns Kohler aperture 100 Retard 14.2 volts Resoln 5.708

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

Primary O2 on: epoxy = 2.4 nA; standard = 3.2 nA; PESABM on std = 56 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

300kHz -> 9700 ppm = 40% (254)
 MG1 = 490 (?) Ma
 BS1 = 507 (?) Ma
 Xenol = 994 Ma & 7/6 age = 997 Ma

06-63 -> 8 x BR266

206 = 10
 207 = 30
 Scans = 6

06-69A -> >= 10 x BR266

206 = 20
 207 = 20
 scans = 5

-> < 50% scale on 300kHz

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

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BR. 1-1	9:30	5.43	18	3700	903	.02	22.2	559±2	601±25	✓
BR. 1-2	9:48	5.48	19	4000	902	-	24.5	557±3	594±13	✓
SDA. 1-1	10:13	5.40	19	5700	163	.18	20.2	3547±28	3545±12	✓
SDA. 2-1		aborted → high 204								
SDA. 3-1	10:41	5.40	18	5100	156	.03	20.1	3471±29	3577±8	✓
BR. 1-3	10:59	5.29	18	3800	909	.05	21.6	556±2	530±24	✓
B. 7-1	11:20	5.50	18	9300	326	.11	21.9	3070±18	3139±6	✓
B. 8-1	11:38	5.33	18	3200	113	.07	21.3	3135±26	3159±10	✓
B. 9-1	12:00	5.39	18	9500	310	.03	20.8	3307±17	3590±7	✓
BR. 1-4	12:18	5.49	18	3800	897	0	21.4	549±3	555±22	✓
B. 10-1	12:45	5.26	19	9100	283	.07	20.1	3360±17	3515±5	✓
B. 11-1	13:06	5.107	18	9300	308	.11	19.9	3426±21	3586±5	✓
B. 12-1	13:33	5.33	18	2500	90	.06	19.7	3127±46	3154±9	✓
B. 12-2	13:51	5.28	18	2300	82	.03	21.2	3085±38	3167±9	✓
BR. 1-5	14:12	5.35	18	3700	895	.12	20.8	546±3	555±20	✓
B. 13-1	14:34	5.21	18	6000	213	.03	19.5	3213±21	3158±8	✓
B. 14-1	14:56	5.05	18	6000	145	0	19.8	3265±∞	3267	✓
B. 15-1	15:09	high 204, aborted.								
B. 16-1	15:19	Primary/duo died after 1st scan. Aborted, restarted duo + running stds.								
BR. 2-1	16:03	5.36	23	4600	844	0	22.2	559±3	563±17	✓
BR. 2-2	16:22	5.19	23	4400	833	0	21.3	569±3	561±15	✓

5% drop + more in 10

10 ↑ 5% during 1st scan + 7% drop in last scan.

hi% drop in sc 3

10 ↑ 4% in scan 1

Mislabelled BR. 1-6 on printout

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 (int) 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.16-16	16:38	5.00	20	2600	85	.07	17.6	3245±41	3172±11	✓	
B.17-1	17:00	5.19	24	6000	148	0	20.9	3391±19	3470±5	✓	
B.18-1	17:32	5.04	25	4700	126	.03	23.1	3199±27	3163±8	✓	
B.19-1	17:55	5.26	24	4600	132	.04	23.8	2942±42	3182±21	✓	18% drop in last 2-5 scans.
BR.2-3	18:16	5.08	22	4000	850	.01	20.5	569±18	567±15	✓	
BR.2-4	18:37	5.08	20	3800	851	0	20.6	577±3	604±19	✓	
BR.2-5	18:57	5.11	19	3600	863	0	20.7	558±42	583±16	✓	20% ↑ then ↓ spike sc 2-3
B.20-1	19:20	5.80	18	2200	75	.14	25.2	2880±173	3051±58	✓	20% ↑ then ↓ spike sc 2-3
B.21-1	19:42	5.45	21	12000	339	.08	21.4	3111±14	3500±3	✓	
B.22-1	20:03	5.16	23	7400	219	.03	22.1	3069±20	3154±6	✓	
B.23-1	20:26	5.16	23	5000	146	.02	20.4	3107±22	3147±7	✓	
BR.2-6	20:44	5.38	20	2500	842	0	12.4	547±4	599±24	✓	
erroneous standard? → swapped to L mount: 06-69											
BR.1-1	21:13	5.19	24	4500	862	.04	23.5	560±3	569±16	✓	
A.1-1	21:34	4.98	23	530	49	.05	20.2	1192±17	1199±57	✓	v. large grain
A.2-1	21:54	4.90	25	990	237	.32	20.7	466±4	467±78	✓	
A.3-1	22:13	5.20	23	770	185	0	20.6	453±	469±	✓	
BR.1-2	22:36	5.60	24	4800	867	0	23.5	561±2	598±17	✓	
BR.1-2-3 Changed run table 206, 207 → 205, 5 scans.											
BR.1-3	22:59	5.02	25	4500	830	.02	22.7	564±9	572±24	✓	
A.4-1	23:21	5.35	21	1100	247	0	21.4	484±9	496±54	✓	
A.5-1	23:39	5.24	22	570	140	.27	22.3	464±7	406±91	✓	Rim.

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

A.5-2	23:57	5-38	20	1100	227	0	20.2	586 ± 11	777 ± 46	✓	Spikes +5% on last scan	
A.5-2 BR.1-6	00:19	5-16	22	4200	842	0	23.3	575 ± 10	560 ± 24	✓		
A.6-1	00:29	high	204,	aborted.								
A.7-1	00:48	5-28	21	760	187	.05	24.1	462 ± 14	478 ± 89	✓		
A.8-1	01:07	5-55	21	1100	258	0	23.3	478 ± 5	458 ± 74	✓		
A.9-1	01:28	5-41	20	1100	287	0	22.4	460 ± 7	490 ± 53	✓		
A.10-1	01:49	5-60	18	960	255	.13	22.6	457 ± 17	501 ± 70	✓		
BR.1-5	02:07	5-61	18	3900	900	-.11	23.3	550 ± 6	585 ± 30	✓		
BR.1-6	02:30	5-18	23	4600	881	0	21.5	573 ± 3	600 ± 23	✓		
A.11-1	02:48	5-22	22	2100	5181	0.18	20	485 ± 2	480 ± 45	✓		
A.12-1	03:05	5-45	21	1500	343	.24	21.8	473 ± 5	415 ± 104	✓		
A.13-1	03:26	5-15	21	600	58	-.01	20.9	1145	1175	✓		
A.14-1	03:43	5-43	21	1400	128	1.03	23.7	1154 ± 14	1212 ± 59	✓		
BR.1-7	04:00	5-13	21	4100	865	.03	20.5	573 ± 2	611 ± 19	✓		
BR.1-8	04:15	5-35	19	4200	904	0	20.9	584 ± 4	560 ± 21	✓		
A.15-1	4:34	5-46	2100	630	168	.03	23.5	477 ± 24	579 ± 164	✓		
mislabelled A.15-1 on printout file.	A.16-1	04:50	5-30	2200	570	160	.26	23.4	462 ± 7	470 ± 160	✓	
A.17-1	05:10	5-34	20	1700	428	.85	21	468 ± 3	534 ± 90	✓		
BR.1-9	05:24	5-32	23	4700	882	.02	21.3	570 ± 3	559 ± 28	✓		
BR.1-10	05:33	5-33	23	4700	402	.06	20	567 ± 2	579 ± 24	✓		
A.18-1	06:03	5-41	24	2400	498	.14	23.5	474 ± 2	405 ± 56	✓		

