

SHB

### UWA SHRIMP LOG SHEET

Date	UWA mount no(s)	Mineral(s)	Whose sample?	Operator(s)
18/9/06	06-07 06-19	ZR	JK	McW + Nick

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

Zircon/Badd.	<b>196</b>	204	204.1	<b>206</b>	207 <sup>20</sup>	208	<b>238</b>	<b>248</b>	<b>254</b>
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	<b>200</b>	204	204.1	<b>206</b>	207	208	<b>248</b>	<b>254</b>	<b>270</b>
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)	<b>202</b>	<b>203</b>	204	204.1	<b>206</b>	207	<b>208</b>	<b>232</b>	<b>254</b>	<b>264</b>	<b>270</b>
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)	<b>194</b>	(196)	204	204.1	<b>206</b>	207	208	<b>238</b>	<b>248</b>	<b>254</b>
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.

<b>Zircon/Badd.</b>	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:	8.161	0.045	~2.010	1.004	2.006	
<b>Titanite/Perovsk.</b>	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:						
<b>Monazite (SHB)</b>	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:						
<b>Xenotime (SHB)</b>	(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 volts Resoln 5991

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

Primary O2 on: epoxy = 3.1 nA; standard = 4.3 nA; PESABM on std = 69 pA

Raster: Time (mins): 2 Aperture: 120 No. of scans: 5

#### 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

900ppmU = 45% scale on 300 kHz scale

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 <sub>206</sub> %	Sensit. 196/194 Keps	Age+/-1σ (Ma) 206/238 206/254 206/270	207/206	Offsets OK?
Alternative		<b>UO2/UO</b> 270/254	<b>194 (xt)</b> 200 (int) 203 (mz)	206 cps	254 270 Keps	204 cps	196/194 264 Keps	206/238 206/254 206/270	207/206	Check after each!!!

Sample/Std ID	Time on printout	UO/U	196 (zr) Keps	206 cps	U ppm	f <sub>206</sub> %	Sensit. Keps	Age+/-1σ (Ma)	207/206	Offsets OK?	Notes
<b>0619</b>											
BR. 1-1	10:05	5.30	23	4300	903	.03	18.1	559±3	543±20	✓	1.1
BR. 1-2	10:21	5.24	24	4400	894	-	18.7	567±3	580±14	✓	1.1
A. 4-1	10:41	4.89	25	570	112	.89	17.5	590±10	383±117	✓	2.7
A. 4-2	10:56	4.95	21	310	70	3.23	16.0	589±10	560±410	✓	1.3
BR. 1-3	11:12	5.17	23	4100	889	.08	17.3	556±2	549±18	✓	0.6
A. 5-1	11:28	5.29	24	1600	298	.06	18.9	590±4	608±42	✓	2.2
A. 6-1		1° dropped during scan 1 → aborted									
A. 6-1B	11:48	5.19	25	2500	505	.04	19.3	564±3	542±26	✓	13.2 1° ↓ 4 w scan 1
BR. 1-4	12:03	5.21	23	4100	887	.06	17.7	559±2	536±21	✓	4.4
A. 7-1	12:19	5.14	25	2200	430	.11	19.8	578±4	550±35	✓	1.5
A. 7-2	12:34	5.32	24	1100	196	.03	20.3	586±4	604±43	✓	2.0
A. 8-1	12:49	5.13	23	2300	45	.67	18.4	605±10	339±250	✓	?
MISABEL BR. 1-5	13:07	5.14	23	4100	893	.03	17.6	563±2	546±29	✓	6.0 one-ve spike
<del>BR. 1-5</del>		unstable 1° → ↓ Duo P + ↑ Duo Current → stabilised									
BR. 1-6	13:42	5.35	18	3300	896	.03	17.4	539±2	532±21	✓	one-ve spike 11.5
BR. 1-7	13:57	5.08	18	3100	937	-	17.1	548±24	563±27	✓	ve drop 10
		lower Duo P + cooled duo again:									
BR. 1-8	14:23	5.06	19	3400	894	.02	17.1	554±3	576±20	✓	1.7
BR. 1-9	14:38	5.16	20	3600	900	.08	18.0	560±3	539±21	✓	2.3
BR. 1-10		1° dropped 30% + stayed down 1 → Aborted									
BR. 1-11	15:11	5.21	19	3500	913	.04	16.4	559±9	573±23	✓	one-ve spike = 11.6 → others = 2%

P=3.5mA  
Duo=300

P=3.7mA  
Duo=290

B  
1.58M

13.2  
1° ↓ 4 w scan 1

6.0  
one-ve spike

one-ve spike  
11.5

ve drop  
10

one-ve spike  
= 11.6 →  
others  
= 2%

