

**UWA SHRIMP LOG SHEET**

**Date** 3/4/08      **UWA mount no(s)** 08-03  
04-81      **Mineral(s)** Rutile      **Whose sample?** Men      **Operator(s)** Men

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

Mineral	Mass	204	204.1	206	207	208	248	254	270		
<i>RUTILE</i>											
<b>Zircon/Badd.</b>	<del>196</del> 192	204	204.1	<b>206</b> 10	207	208	<del>238</del> 248	<del>248</del> 254	<del>254</del> 270		
Count time (secs)	2	10	10	<del>10/20</del>	30/10	10	5	<del>5</del> 5	<del>5</del> 5		
Delay time (secs)	8	3	12	4	23	1	35	2	23		
Centring (secs)	3	-	-	3	-	-	3	3	2		
<hr/>											
<b>Titanite/Perovskite</b>	<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		
<hr/>											
<b>Monazite (SHB)</b>	<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	
<hr/>											
<b>Xenotime (SHB)</b>	<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:	12.098	0.045	~2.010	1.006	2.00 8	
<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** 25 ns      **Kohler aperture** 100      **Retard** .....volts      **Resoln** 4417

**Primary on Steel:** O<sup>-</sup> ..... bits & nA O<sub>2</sub><sup>-</sup> ..... bits & nA

**Primary O<sub>2</sub><sup>-</sup> on:** epoxy = 1.67 nA; standard = 2.33 nA; **PESABM** on std = 40 pA

**Raster:** Time (mins): 23      Aperture: 120 150      **No. of scans:** 44

**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

~~1/10/07~~ 2/4/08

~~0716~~ 0803

264.15665 Page 1

ED	Time	UO/UO <del>206/206</del>	192 <del>192</del> cps	206 cps	220 <del>220</del> ppm	fr206 %	Sensit.	Age <del>206/206</del> 270	Age 207/206	spike OK?	Comments
0803 WH.1-1	17:02	1.07	950	2800	2700	.23	/	1.04	2602±24	✓	
E.1-1											
WH.2-1											
SHUT DOWN → Restart 3/4/08											
WH.1-2	9:23	.941	1200	5200	150	.04	45.4	2624±27	2600±14	✓	
WH.2-2	9:40	1.20	670	7600	316	.02	36.0	2335±18	2627±8	✓	1° spike on last peak!
0481C.1-1	9:58	1.21	680	54	15	4.23	36.9	397±19	327±225	✓	1° unstable.
WH.3-1	10:16	0.79	1200	4200	120	.07	43.9	3054±49	2606±25	✓	
WH.3-2	10:33	.84	990	5000	173	.08	37.3	2923±52	2642±8	✓	1° unstable
0481C. 1-2	11:03	.91	140	9.1	12	9.20	5.2	551±90	625±341	✓	— " —
" 1-3	11:34	1.23	1100	38	6.5	3.80	50.4	387±?	368±?	✓	1° spike in scan 1 only
WH.4-1	11:51	1.12	1200	6500	171	.02	46.2	2303±18	2747±8	✓	1° slightly unstable.
0481C. 1-4 (1-2)	12:02	1.28	1000	41	7.1	1.38	50.8	404±?	525±?	✓	Switched to 2 scans
i-5 (1-1)	12:12	1.25	970	44	7.9	5.12	48.2	403±?	134±?	✓	1° stable
i-6	12:20	1.23	920	83	16.8	5.77	44.8	395±?	458±?	✓	— " —
i-7	12:29	1.18	900	46	9.3	7.70	43.3	407±?	207±?	✓	"
B.1-1	12:38	1.28	880	56	11.3	1.46	45.8	383±?	542±?	✓	"
1-2	12:49	1.33	730	52	11.5	2.35	40.5	396	308	✓	"
1-3	12:58	1.33	870	34	6.9	.50	49.4	361	766	✓	"
A.1-1	13:08	1.31	790	57	13.2	4.19	43.6	355	563	✓	"
1-2	13:16	1.26	910	64	11.7	2.06	46.2	415	279	✓	"
1-3	13:25	1.19	880	84	15.9	2.69	40.6	454	596	✓	"
1-4 (RIM)	13:34	1.35	930	449	8.8	1.42	51.9	374	837	✓	"
0803* WH.5-1	13:46		1300	8400	212	0.00	44.8	2713	2644	✓	"

\* checked 206 peak centre  
# adjusted d20P + 1° current.

go to p. 2

ID	Time	VO/V 254/238	192 Kcps	206 cps	V ppm	f <sub>rot</sub> %	Sensit.	Age 206/238	Age 207/206	Optim OK?	Comments
0803											1° stable
WH-6-1	13:55	0.97	1000	7400	217	.11	39.6	2728	2629	✓	
7-1	14:03		1600	5700	123	.24	43.9	3140	2631	✓	"
8-1	14:12		1200	5900	154	.11	43.4	2764	2634	✓	"
Spot	VO <sub>2</sub> KHz		Spot	VO <sub>2</sub> KHz			Spot	VO <sub>2</sub> KHz	Spot	VO <sub>2</sub> KHz	
9-1	7.6	* ↓ 49-50 C	27-1	9.2	↑ C		45-2	7.7	65-1	3.7	
10-1	5.8	* 51-52	28-1	8.4	↓ B 22-23		46-1	6.3	66-1	7.7	
11-1	6.4	* 53-54	29-1	8.8	* 24-25		47-1	7.1	67-1	6.0	
12-1	7.0	* 55-58	30-1	8.4	* 26-28		48-1	6.0	68-1	6.1	
12-2	6.0		31-1	8.2	* 29-30		49-1	6.5	69-1	7.6	
13-1	8.2		32-1	8.0			50-1	6.5	70-1	7.7	
14-1	7.2		33-1	7.2			51-1	7.6	71-1	8.1	* 20-21
15-1	7.0		34-1	7.6			52-1	6.5	72-1	5.7	
16-1	8.2		35-1	9.0	* 30-31		53-1	6.8	73-1	6.7	
17-1	7.6		36-1	9.4	* 32-34		54-1	7.8	74-1	8.8	* 18-19
18-1	6.6		37-1	5.8			55-1	6.5	75-1	6.3	
19-1	7.0		38-1	8.5	* 35-37		56-1	6.2	76-1	9.7	* 16-17
20-1	7.2		39-1	4.6			57-1	6.4	77-1	8.0	
21-1	5.2		40-1	7.5			58-1	6.7	78-1	7.2	
22-1	7.8		41-1	7.5			59-1	6.2	79-1	6.6	
23-1	3.8		42-1	8.4	* 38-39		60-1	8.1	80-1	6.4	
24-1	8.8		43-1	7.7			61-1	6.2	81-1	5.0	
25-1	6.4		44-1	9.6	* 40-42		62-1	6.6	82-1	3.7	
26-1	6.6		45-1	7.7			63-1	8.0	83-1	8.1	
							64-1	6.3	84-1	7.3	
									85-1	5.8	
									86-1	2.0	
									87-1	8.2	
									88-1	7.7	
									89-1	6.4	
									90-1	5.5	
									91-1	6.7	
									92-1	6.1	

↑ B  
↓ A  
A  
↓ D  
D  
↓  
Finished spotting  
all grains

Note: 0803F = 43-48

ID	Time	UO/U 254/238	196 Kcps	206 cps	U ppm	f <sub>206</sub> %	Sensit.	Age 206/238	Age 207/206	spike OK?	Comments
0803											<u>SBM</u>
WH.82-1	16:48	1.60	420	4000	150	.08	35.1	2623±38	2637±8	✓	-6.5%
82-2	17:06	1.52	430	2600	97.4	.16	33.7	2742±40	2632±16	✓	-8.4%
86-1	17:25	0.98	1100	1500	26.5	.06	47.1	3704±70	2581±14	✓	SUSPECT (-ve spike) -21.9%
86-2	17:45	1.09	890	2300	48.2	.10	43.3	3502±38	2633±11	✓	-4.4%
86-3	18:04	0.92	1100	5300	93.6	.07	43.4	3983±25	2621±7	✓	-5.1%
0727K. 3-1	18:18	- aborted		→ v low U + Pb							
3-2	18:25		"		"	"	"				
6-1	18:32		"		"	"	"				
6-2	18:39		"		"	"	"				
5-1	18:46		"		"	"	"				

0727

Location	UO <sub>2</sub> concentration	196 KHz	U ppm
Khan	16	700	ppm U
H.1-1	0.1	4.4	ppm U
H.2-1	0.03	~1	ppm U
H.3-1	0.08	~4	ppm U
H.4-1	0.03	~1	ppm U

0803

WH.87-1	19:18	1.08	760	7600	190	.02	37.6	3553±32	2648±7	✓	-8.8%
87-2	19:35	1.12	800	7600	170	.04	41.1	3488±39	2626±5	✓	-10.7%
E.1-2	19:54	0.72	1900	20	0.9	32.8	55.1	1034±136	—	✓	-18.1%
E.2-1	20:16	0.68	2100	25	1.4	9.02	54.1	1108±87	623±1212	✓	-23.8%
E.2-2	20:36	0.66	2300	54	3.3	5.32	59.9	1015±47	—	✓	-22.7%
* → WH.85-1	20:56	1.20	710	6400	155	.03	39.7	3344±35	2654±9	✓	-4.0% with spikes in scans
85-2	21:13	1.21	730	6500	150	.03	41.0	3365±31	2633±8	✓	-7.5% with spikes
F.1-1	21:32	0.70	1800	27	1.8	9.97	47.3	1033±101	1282±1210	✓	-5.0% no spikes
F.2-1	21:49	1.23	810	24	3.1	14.36	46.4	580±65	—	✓	-8.0% no spikes
WH.90-1	22:09	0.70	1900	3800	46.1	.05	54.1	4569±78	2686±39	✓	-7.0% no spikes

\* check peak centre on 264 using NBS

FINISH