

## UWA SHRIMP LOG SHEET

**Date** 5/4/05      **UWA mount no(s)** MB-3 +      **Mineral(s)** monazite      **Whose sample?** MB      **Operator(s)** MB

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

	<b>196</b>	204	204.1	<b>206</b>	207	208	<b>238</b>	<b>248</b>	<b>254</b>		
<b>Zircon/Badd.</b>	<b>196</b>	204	204.1	<b>206</b>	207	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	3	2	2		
Centring (secs)	3	-	-	3	-	-	3	3	2		
<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		
<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	
<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:	.....	.....	.....	.....	.....	
<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:	1.004	1.107	0.045	~2.006	1.006	2.008
<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** 50      **Retard** 9943 volts      **Resoln** 5954

**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 = 0.23 nA; standard = 0.30 nA; PESABM on std = 14 pA

**Raster:** Time (mins): 2.0      Aperture: 80      No. of scans: 7

### 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

### Comments:

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 <sub>206</sub> %	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!!!
Fr. 1-1	10:25	1.3496	2156	8179	10.3	6	192	0.2141	0.0609	✓
PO95.1-1	10:53	1.2920	2201	376k	122	8	331	0.7496	0.1051	✓
QMa.1-1	11:15	1.4656	2392	7618	9.8	1	79	0.2183	0.0583	✓
JHS4.1-3	11:46	1.3975	2219	79678	16	2	129	1.3916	0.1928	✓
JHS4.1-4	12:10	1.3801	2089	96369	19	2	96	1.3952	0.1919	✓
Fr. 1-2	12:36	1.4212	2058	7695	9.9	4	180	0.2176	0.0598	✓
JHS4.2-6	13:00	1.3910	2450	12428	2.5	2	78	1.3902	0.1904	✓
JHS4.2-7	13:24	1.4581	2422	10560	2-2	5	121	1.4061	0.1871	✓
PO95.1-2	13:47	1.2913	2178	374k	131	6	323	0.7368	0.1060	✓
JHS4.2-8	14:13	1.3561	2608	14817	3.1	4	92	1.3426	0.1908	✓
JHS4.2-9	14:35	1.3801	2537	13189	2.8	5	89	1.3020	0.1938	✓
Fr. 1-3	14:59	1.3548	2355	8499	10.6	5	200	0.2170	0.0556	✓
JHS4.3-3	15:23	1.3451	2457	24829	5.0	6	111	1.3305	0.1922	✓
JHS4.3-4	15:46	1.3475	2490	27285	5.5	4	134	1.3493	0.1951	✓
PO95.2-1	16:09	1.3035	2102	695k	240	13	277	0.7561	0.1661	✓ * Om: scan #5
JHS4.4-2	16:37	1.3143	2119	50170	10.0	5	215	1.3150	0.1917	✓
JHS4.5-2	17:01	1.2727	2092	125212	26.0	7	190	1.2253	0.1921	✓
Fr. 1-4	17:23	1.3459	2290	8525	10.7	3	205	0.2136	0.0612	✓
JHS4.15-2	17:48	1.3085	2550	213520	44	5	129	1.2824	0.1928	✓
JHS4.6-2	18:12	1.1843	2712	383000	78	23	253	1.1617	0.1913	✓
PO95.2-2	18:36	1.2664	2575	832k	287	6	334	0.7349	0.1051	✓

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 <sub>206</sub> %	Sensit.	Age+/-1σ (Ma)		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!!!
JHS4.7-1	19:01	1.2458	2759	101568	20.3	7	250	1.2429	0.1927	✓
JHS4.8-2	19:30	1.2980	2842	31218	6.4	13	169	1.2623	0.1952	✓
Fr. 1-5	19:56	1.2980	2730	9571	11.9	13	229	0.2802	0.0664	✓
JHS4.8-3	20:20	1.3014	2748	125994	25.1	11	174	1.3047	0.1919	✓
JHS4.9-3	20:47	1.4183	2989	17886	3.6	4	121	1.4187	0.1886	✓ * Many 1° spikes up to 7%.
JHS4.9-4	21:10	1.3604	3029	40571	8.2	5	160	1.3400	0.1925	✓ * numerous 1° spikes up to 2% on last 3 scans.
PD95.1-3	21:51	1.2530	2547	4286	141	15	342	0.7610	0.1017	✓
PD95.1-4	22:15	1.2642	2780	3776	133	10	333	0.7183	0.1053	✓
JHS4.10-2	22:39	1.3459	2853	157791	32	7	118	1.3251	0.1905	✓
JHS4.10-3	23:03	1.3487	2803	31438	6.4	5	141	1.3287	0.1910	✓
Fr. 1-6	23:26	1.3163	2497	8475	11.1	4	212	0.2040	0.0623	✓ Many 1° spikes up to 2%.
Fr. 1-7	23:48	1.3194	2503	8599	11.4	5	216	0.1998	0.0591	✓ omit scan #6.
JHS4.11-4	00:13	1.3563	2595	15856	3.2	1	130	1.3482	0.1960	✓ omit scans 5 + 1° spiking. 6
JHS4.14-2	00:42	1.3965	2545	24661	5.1	1	115	1.3598	0.1945	✓
JHS4.12-2	01:09	1.3008	2762	87458	18	0	159	1.2673	0.1931	✓ magnet doing funny things on scan 6.
PD95.2-3	01:44	1.2625	2181	756	252	4	296	0.7146	0.1060	✓
JHS4.13-4	02:09	1.2930	2607	25284	5.0	2	121	1.2916	0.1906	✓ omit scan 7 3% 1° spike.
JHS4.13-5	02:35	1.3401	2352	30219	6.2	4	121	1.2927	0.1886	✓ 4% 1° spike on scan 2
Fr. 1-8	03:03	1.3855	1996	7211	9.0	3	168	0.2210	0.0557	✓ omit scan 4 5% 1° spike