

# UWA SHRIMP LOG SHEET

**Date** 19/1/06      **UWA mount no(s)** 05-89      **Mineral(s)** ZR      **Whose sample?** JK      **Operator(s)** McN + Nick.

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

<b>Zircon/Badd.</b>	<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	84	2	23		
Centring (secs)	3	-	-	84	-	-	82	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:	8.152	0.045	~2.003	1.003	2.004	
<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 24 ns Kohler aperture 100 Retard 14 volts Resoln 5040

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 = 2.4 nA; standard = 3.4 nA; PESABM on std = 70 pA

Raster: Time (mins): 2.5 Aperture: 110 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

#### Comments:

05-89 B+C

Tem x 12

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		<b>UO2/UO</b> 270/254	<b>194 (xt)</b> <b>200 (tnt)</b> <b>203 (mz)</b>	<b>206</b> cps	<b>254</b> <b>270</b> Kcps	<b>204</b> cps	<b>196/194</b> <b>264</b> Kcps	<b>206/238</b> <b>206/254</b> <b>206/270</b>	<b>207/206</b>   Check after each!!!

05-89

CZ.1-1	10:51	6.91	20	2650	551	.58	22.2	561±3	473±49	✓	
tem.1-1	11:14	6.60	20	345	88	1.46	22.8	433±6	159±343	✓	
tem.2-1	11:33	6.54	22	440	124	.61	21.7	428±5	384±166	✓	+ve spm on pin
B.1-1	11:52	6.42	22	1700	337	.39	22.2	620±5	661±59	✓	" "
B.2-1											" "
B.3-1	12:28	6.57	20	700	131	0.72	22.5	616±6	595±85	✓	" "
tem.3-1	12:49	6.47	21	850	233	.65	22.5	433±3	241±91	✓	
B.4-1	13:23	6.19	20	1800	356	1.5	20.6	616±5	593±69	✓	" "
B.4-2	13:47	6.20	22	2100	393	0.44	21.3	616±4	575±46	✓	
B.5-1	14:08	6.30	22	1900	309	.20	23.2	609±10	652±53	✓	
B.6-1	14:33	6.22	23	1700	292	.20	24.1	589±5	618±65	✓	" "
B.6-2	14:52	6.24	22	1400	265	.08	22.4	581±6	637±43	✓	
B.7-1	15:15	6.35	22	3200	583	.17	23.5	622±4	573±30	✓	
B.8-1	15:44	6.58	22	2100	430	.20	23.4	602±5	609±30	✓	
TEM.4-1	16:06	6.33	22	500	121	2.5	22.7	428±5	-	✓	" "
B.9-1	16:27	6.44	22	2700	448	.40	24.2	604±5	547±35	✓	" "
B.10-1	16:50	6.29	22	1500	289	.48	22.8	586±5	462±75	✓	
B.11-1	17:14	6.10	24	3600	600	.17	22.8	630±4	587±35	✓	
B.12-1	17:38	6.17	23	2200	377	0.55	23.7	600±4	555±60	✓	
TEM.5-1	18:00	6.21	24	600	161	.13	23.9	437±4	512±77	✓	
TEM.6-1	18:19	6.60	18	600	165	2.5	19.4	460±6	-	✓	

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

(rim)	0589C-1-1	18:40	6-11	44	30	256	.33	22-1	638 ± 5	516 ± 67	✓	
(core)	C-1-2	19:00	6-47	45	143	729	.14	24-5	941 ± 6	1847 ± 12	✓	
	C-2-1	19:22	5-98	49	62	209	0-16	22-4	1137 ± 11	2368 ± 13	✓	
	C-2-2	19:45	6-13	45	88	176	.15	22	2329 ± 24	2622 ± 12	✓	
	C-2-3	20:04	6-16	46	51	358	.13	23-6	635 ± 4	946 ± 27	✓	
	C-3-1	20:23	6-34	47	121	205	.12	23-7	2562 ± 135	2647 ± 10	✓	tree spikes in primary
	TEM-7-1	20:44	6-37	46	20	252	.28	23-5	445 ± 4	408 ± 67	✓	— " —
	TEM-8-1	21:13	6-24	48	7	84-3	1-8	23	433 ± 8	—	✓	— " —
	0589C-3-2	21:34	5-94	47	89	181	-08	19-1	2289 ± 143	2655 ± 8	✓	— " —
	C-4-1	21:56	5-55	45	27	236	.31	19-2	646 ± 32	549 ± 62	✓	— " —
	C-5-1	22:17	6-36	51	43	283	.25	24-7	609 ± 6	587 ± 46	✓	
	C-5-2	22:36	6-17	50	76	614	-07	23-5	615 ± 4	602 ± 21	✓	
	C-6-1	23:00	6-17	51	57	292	0-14	24-8	846 ± 24	1556 ± 60	✓	— " —
	C-6-2	23:20	6-10	49	41	338	.28	24-6	584 ± 4	613 ± 53	✓	— " —
	C-7-1	23:39	6-33	50	44	328	.20	23-9	629 ± 4	568 ± 60	✓	— " —
	C-8-1	00:01	6-30	52	35	255	-09	24-3	636 ± 5	1070 ± 41	✓	
	TEM-9-1	00:24	6-02	51	4-6	56	-90	22-7	427 ± 8	—	✓	
	TEM-10-1	00:48	6-28	49	11	129	.82	24-1	425 ± 5	—	✓	
	C-9-1	01:09	6-73	47	61	168	-04	25	1617 ± 14	2478 ± 9	✓	
	C-10-1	01:28	6-45	47	64	505	0-015	23-9	624 ± 4	611 ± 21	✓	
	C-11-1	01:50	6-24	50	38	302	-129	23-9	603 ± 4	414 ± 46	✓	

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?
								206/238	207/206	
Alternative		<b>UO2/UO</b> <b>270/254</b>	<b>194 (xt)</b> <b>200 (tnt)</b> <b>203 (mz)</b>	<b>206</b> cps	<b>254</b> 270 Kcps	<b>204</b> cps	<b>196/194</b> 264 Kcps	<b>206/238</b> <b>206/254</b> <b>206/270</b>	<b>207/206</b>	Check after each!!!

<del>C.12-1</del>	02:09	6.38	47	41	314	0.40	24.3	592±6	565±54	✓
TEM.11-1	02:31	6.62	51	54	663	.42	25	432±3 <del>228</del>	279±36	✓
TEM.12-1	02:51	6.41	48	11	128	.87	24.4	417±6	—	✓
B.13-1	3:14	5.91	50	36	282	.61	22.8	635±7	541±58	✓
B.13-2	3:34	6.02	49	51	387	.08	23.3	614±5	618±32	✓
<small>value corrected</small> B.14-1	3:54	6.23	48	36	309	.27	23	588±4	554±61	✓
B.15-1	04:16	6.66	50	54	668	.22	25.2	581±4	527±46	✓
TEM.13-1	04:38	5.96	54	10	122	2.9	24.4	413±5	—	✓
C.13-1	04:59	5.99	52	88	276	.10	25	1419±9	2367±9	✓
C.13-2	05:18	6.19	50	64	474	.02	23.5	613±3	603±28	✓
C.14-1	05:39	6.06	45	88	444	.08	21.5	1006±7	2046±12	✓
C.15-1	05:58	6.18	49	46	359	-.ve	23	623±4	660±21	✓
C.16-1	06:20	6.17	51	51	382	.17	24.1	630±4	588±31	✓
C.17-1	06:43	6.39	52	44	303	.16	25.6	623±5	701±33	✓
C.18-1	07:03	6.24	50	54	419	.19	23.8	607±4	591±29	✓
C.19-1	07:23	5.99	52	29	240	.15	23.7	620±5	637±58	✓
C.20-1	07:44	6.39	49	80	257	.01	25.5	1448±9	2408±11	✓
TEM.14-1	08:10	6.09	50	8	97	1.6	23.5	439±7	128±172	✓
TEM.15-1	08:31	6.19	48	14	168	.97	23.4	429±5	—	✓

Some pri spikes.