

UWA SHRIMP LOG SHEET

Date 13/4/07 **UWA mount no(s)** 07-16 **Mineral(s)** ZR **Whose sample?** McN **Operator(s)** 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	105	5	5	2
Delay time (secs)	8	3	1	4	23	1	34	2	23
Centring (secs)	3	-	-	35	-	-	3	3	23

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:	8.165	0.045	~2.003	1.001	2.001	
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 25 ns **Kohler aperture** 100? **Retard** 6959 volts **Resoln** 4456

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

Primary O₂⁻ on: epoxy = 3.9 nA; standard = 5.4 nA; **PESABM** on std = 137 pA

Raster: Time (mins): 2.0 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
 Xeno1 = 994 Ma & 7/6 age = 997 Ma

45% scale
 on 300KHz
 = 980 ppm U

* on NO⁻ peak → changed to O₂⁻ + larger aperture.

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Sk: 1
 <30-40
 cps
 200u

Sample/ Std ID	Time on printout	UO/U 254/238	196 (zr) Kcps	206 cps	^{300 max} U ppm	f ₂₀₆ %	Sensit.	Age+/-1σ (Ma) 206/238	207/206	Offsets OK?
Alternative		UO2/UO 270/254	194 (xt) 200 (fnt) 203 (mz)	206 cps	254 270 Kcps	204 cps	196/194 264 Kcps	206/238 206/254 206/270	207/206	Check after each!!!

0716	BR.1-1 *	12:29	4.81	50	3200	903	0	19.3	559±7	586±15	✓
	BR.1-2	13:02	6.47	27	4800	903	.15	16.5	558±2	524±25	✓
	BR.1-3	13:17	6.23	28	4700	878	.05	14.8	564±2	567±22	✓
Mislabeled	SMA.1-1	13:33	6.06	28	22K	557	.03	14.0	3489±131	3582±43	✓
	SMA.1-2	13:48	6.83	23	26K	740	.02	14.1	3263±20 3575±19	3545±19	✓
IMAGE	BR.1-4	14:03	6.84	25	4900	938	.12	15.4	553±4	548±17	✓
7	A.1-1	14:24	7.18	23	4200	98	.09	15.2	3606±34	366.3±5	✓
7	A.2-1	14:41	6.90	24	6200	167	.12	15.1	3562±29	3691±7	✓
7	A.3-1	14:58	5.95	30	6200	156	.09	14.4	3369±36	3688±7	✓
7	A.4-1	15:18	5.85	28	11000	287	.05	13.4	3584±25	3276±3	✓
7	A.5-1	15:35	6.92	23	3500	83	.11	14.9	3652±55	3759±7	✓
	BR.1-5	15:56	6.61	26	4700	425	.16	14.9	552±3	545±31	✓
1	A.6-1	16:20	7.25	22	11000	302	.09	15.4	3269±19	3612±6	✓
1	A.7-1	16:37	6.63	27	4500	124	.18	15.3	3156±26	3623±7.5	✓
2	A.8-1	16:55	6.28	26	7200	221	14 .15	14.3	3007±23	3614±5	✓
2	A.9-1	17:13	9.22	25	1900	203	23 .72	23	648±17	3575±41	✓
2	A.10-1	17:31	7.57	22	12000	262	.06	15.6	3605±27	3790±3	✓
3	A.11-1	17:53	6.33	26	6100	168	.11	14.2	3574±38	3650±7	✓
3	A.12-1	18:10	7.08	23	9500	267	.13	14.8	3345±23	3621±6	✓
3	A.13-1	18:28	5.96	29	8600	141	.12	14.3	3506±21	3551±4	✓
3	A.14-1	18:47	5.48	32	12000	330	.04	13.5	3178±46	3581±5	✓

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 cps	254 270 Kcps	204 cps	196/194 264 Kcps	206/238 206/254 206/270	207/206 Check after each!!!
BR.1-7	19:03	6.14	28	4400	837	.06	14.4	572±3 567±17	✓
<i>miss label</i> BR.1-8	19:20	6.25	27	4500	881	.12	14.4	554±2 578±19	✓
<i>illum bulbs Replace</i> 3 A.15-1	19:37	6.37	26	13000	369.8	.05	14.4	3143±16 3602±3	✓
3 A.16-1	20:38	6.67	24	10k	269	.06	14.3	3355±61 3716±5	✓
3 A.17-1	20:55	6.52	26	5100	133	.08	14.4	3340±26 3759±44	✓
4 A.18-1	21:11	6.49	23	4000	102	.09	13.1	3677±35 3654±6	✓
4 A.19-1	21:28	6.59	25	7300	176	.06	14.5	3580±24 3750±4	✓
4 A.20-1	21:44	6.61	24	1200	27	.51	14.2	3715±97 3699±11	✓
BR.1-9	22:03	7.33	22	5100	998	.07	15.5	554±3 564±18	✓
4 A.21-1	22:24	6.73	25	11000	259	.05	15.0	3471±19 3643±5	✓
4 A.22-1	22:45	6.22	27	4900	122	.12	14.9	3440±29 3673±5	✓
4 A23-1	23:04	6.39	25	7400	186	.12	14.3	3545±38 3642±6	✓
5 A24-1	23:25	6.05	27	8000	209	.14	13.7	3437±26 3624±6	✓
5 A25-1	23:42	6.17	28	8900	212	.03	14.5	3581±28 3775±4	✓
5 A.26-1	23:56	High 206, checked							
5 A.27-1	00:12	6.95	26	6400	268	.18	15.9	2412±15 3573±5	✓
5 A.28-1	00:32	6.41	29	4900	128	.17	15.9	3104±34 3794±8	✓
6 A.29-1	00:50	6.14	29	7700	223	.32	14.1	3019±18 3798±6	✓
6 A.30-1	01:08	6.21	23	7700	253	.04	11.9	3235±28 3735±5	✓
BR.1-10	01:24	7.62	21	4800	1023	.09	15.8	520±3 572±20	✓
6 A31-1	01:40	6.72	24	20k	509	.06	14.1	3444±18 3674±3	✓

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?		
<i>Alternative</i>		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!!!		
8	32-1	0200	5.77	27	3500	87	.17	13	3785±40	3836±9	✓
9	33-1	02:19	5.54	29	8000	239	.11	12.6	3263±30	3720±25	✓
9	34-1	02:27	High 206, aborted.								
9	35-1	02:43	6.38	26	8300	280	.08	14.9	3589±21	3705±4	✓
10	36-1	03:04	6.28	26	11000	272	.06	13.8	3607±19	3646±5	✓
11	37-1	03:25	6.82	23	6800	282	.12	14.2	3066±25	3686±5	✓
12	38-1	03:42	5.10	28	5500	170	.08	11.3	3554±29	3645±8	✓
13	39-1	04:00	6.18	27	11000	313	.07	14.5	3251±25	3569±4	✓
14	40-1	04:17	6.27	27	8200	189	.08	14.6	3648±25	3721±5	✓
	BR.1-11	04:36	7.49	21	5000	1013	.07	15.6	537±3	564±16	✓
	BR.1-12	04:53	6.54	27	4800	915	.13	15.9	539±2	567±18	✓
	BR.1-13	05:09	6.50	28	4900	903	.08	15.7	542±2	560±15	✓
14	41-1	05:27	7.01	24	14000	585	.31	15.3	2215±10	324 ⁸ ±5	✓
14	42-1	05:46	6.19	27	6100	8139	.08	14.4	3652±31	3819±6	✓
14	43-1	06:03	6.76	23	2500	62	.19	13.8	3716±45	3830±6	✓
14	44-1	06:20	6.63	24	5500	159	.10	14	3181±30	3584±6	✓
14	45-1	06:36	6.36	26	6000	160	.10	15.9	3356±23	364 ⁸ 34±5	✓
14	46-1	06:53	6.60	25	14000	368	.03	14.6	3357±18	3590±3	✓
	BR.1-14	07:15	6.66	26	4700	902	.05	15.2	562±2	555±15	✓
	BR.1-15	07:31	7.91	20	5000	1018	.13	15.7	533±2	567±18	✓
	47-1	07:51	6.82	25	13000	347	.20	15.5	2446±22	3500±5.3	✓

mislabel

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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)		Offsets OK?
								206/238	207/206	

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

BR.2-1	08:19	6.46	26	5000	977	.13	14.5	556±3	563±23	✓
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BR.2-2	08:27	6.76	25	5100	998	.05	15	565±3	567±14	✓
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