

<b>Analysis</b>	<b>Y</b>	<b>1<math>\sigma</math></b>	<b>Th</b>	<b>1<math>\sigma</math></b>	<b>Pb</b>	<b>1<math>\sigma</math></b>	<b>U</b>	<b>1<math>\sigma</math></b>	<b>Age</b>
V436A-11a	11771	27	48799	149	1106	32	4305	38	386
V436A-11b	11811	27	52215	158	1156	32	4260	38	384
V436A-11c	10730	25	42330	132	1005	31	3910	37	400
V436M-11h	7208	21	34171	119	883	30	4074	37	410
V436M-11i	7466	22	30647	109	796	30	3822	36	406
V436M-11j	8673	24	32750	115	915	30	4152	37	434
V436M-11d	4683	17	30341	108	802	30	3934	36	411
V436M-11f	9076	24	33244	116	848	30	4032	37	401
V436M-11g	10564	27	32273	113	814	30	3913	37	395

**Table 1.** Shows the trace element analyses, analytical error for each element and the resulting age for each analysis for one monazite grain numbered Mz11 from sample V436. The errors for each element are provided at the 1 $\sigma$  confidence level and are the results of counting statistics associated with each analysis. The location of each analysis is shown on the BSE image of the grain in fig. 8A,B. The Y, Th, Pb and U analyses are given in ppm and the calculated age as Ma.

## Monazite Ages

<b>V634A</b>									
Monazite	Monazite position	Ages					Mean	Stdev	Std error
V634A-Mz1	median	390	385	389	392	382	388	4	2
V634A-Mz4rim	rim	389	383	394	380	392	387	4	2
V634A-Mz4core	rim	415	421				418	7	3
V634A-Mz6	matrix	360	366	370	368		366	4	3
V634A-Mz8	median	392	420	387	374	395	394	17	8
V634A-Mz9	median	397	375	372	405		387	16	8
V634A-Mz20	core	394					394	N/A	N/A
V634A-Mz21	core	434	395	405			411	20	12
V634A-Mz22	core	436	426				431	7	5
V634A-Mz24	median	407	401	399			402	4	2
V634A-Mz27	median	418	408				413	7	5
V634A-Mz28	rim	374	387	377			379	7	4
V634A-Mz29	core	432	426	434			431	4	2
V634A-Mz30	median	384	411				398	19	14
V634A-Mz33	matrix	414	401	408			408	7	4
V634A-Mz36R	median	405	407	387			400	11	6
V634A-Mz36C	median	432					432	N/A	N/A
V634A-Mz37	core	424	425				425	1	1
V634A-Mz38	core	416	420	435			424	10	6

  

<b>V436A</b>									
Monazite	Monazite position	Ages					Mean	Stdev	Std error
V436A-Mz1	core	399	385	381	397	399	392	9	4
V436A-Mz4	rim	390	377	388	374		382	8	4
V436A-Mz5	core	388	395	376	378		384	9	4
V436A-Mz10-C	median	399	396	381	384		390	9	4
V436A-Mz10-R	median	367	353	366	371		364	8	5
V436A-Mz11	median	434	411	401	395	406	386		
		384	400	410			403	15	5
V436A-Mz12-C	rim	418	394	404	393		402	12	6
V436A-Mz12-R	rim	368	375	377			373	5	3
V436A-Mz25	core	374	388	401	379		386	12	6
V436A-Mz20-C	rim	374	346	348	362		358	13	7
V436A-Mz20-R	rim	316	329	301			315	14	8
V436A-Mz21	rim	359	366				363	5	4
V436A-Mz22	rim	383	403				393	14	10

Table 2

<b>V436B</b>										
Monazite	Monazite position	Ages						Mean	Stdev	Std error
V436B-Mz1	rim	407	430	410				416	13	7
V436B-Mz2	rim	358	365					362	5	4
V436B-Mz3	rim	346	334	354	342	366	342	357	14	4
		370	363	373	361	378	356			
V436B-Mz4	matrix	342	332					337	7	4
V436B-Mz6	matrix	342	333	335	345			339	6	3
V436B-Mz8	rim	346	351					349	4	3
V436B-Mz9	rim	350	372	335	334			348	18	9
<b>V653</b>										
Monazite	Monazite position	Ages						Mean	Stdev	Std error
V653Mz1	rim	364	329	346	330	363		346	17	8
V653Mz1	rim	359	379	393				377	17	10
V653Mz4	matrix	357	344	353	345			350	6	3
V653Mz5a	rim	347	353					350	4	3
V653Mz5b	rim	371	366					369	4	3
V653Mz7	rim	362	349	343	382	351	369	358	12	4
		356	354							
V653Mz21	rim	324	313					319	8	6
V653Mz23	matrix	313	331	334	330			327	9	5
V653Mz24	matrix	363	344	326	355			347	16	8
V653Mz30	rim	348	352	348	332			345	9	4
V653Mz31	rim	351	357					354	4	3
V653Mz33	rim	307	316	303				309	7	4

**Table 2.** Shows the age for each monazite grain that was dated, the location of the grain relative to the core, median and rim of the porphyroblast, where these can be distinguished microstructurally according to successive foliations, the mean of these ages, the standard deviation and the standard error. For monazite grains with compositional domains that yield different ages, the ages are listed on different lines and labelled as -C (core) and -R (rim) for monazite core and rim.