EXP#22F08450 > AS20SEP21-7 > STEELY (21-32)
WESTERN CASCADES > NORTH BEND
22-OSU-01 (1B29-22) > Incremental Heating > Biotite > Dan Miggins

Information on Analysis and Constants Used in Calculations

Project = **STEELY (21-32)**
Sample = **AS20SEP21-7**
Material = **Biotite**
Location = **North Bend**
Region = **Western Cascades**
Analyst = **Dan Miggins**
Irradiation = **22-OSU-01 (1B29-22)**
Position = **X: 999 | Y: 999 | Z/H: 53.04625 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.97204 ± 0.00937**
FCT-NM J-value = **0.00155690 ± 0.00000146**
Air Shot 40Ar/36Ar = **300.2160 ± 0.3422**
Air Shot MDF = **0.99861921 ± 0.00038415 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **50 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-F**
Preferred Age = **Plateau Age**
Age Classification = **Crystallization Age**
IGSN = Undefined
Rock Class = Undefined
Lithology = Undefined
Lat-Lon = Undefined - Undefined
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K(total) = **5.463 ± 0.107 E-10 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.014 E-10 1/a**
Decay 40K(β^-) = **4.884 ± 0.099 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Production 39/37(ca) = **0.0006425 ± 0.0000059**
Production 38/37(ca) = **0.0001800 ± 0.0000173**
Production 36/37(ca) = **0.0002703 ± 0.0000005**
Production 40/39(k) = **0.000607 ± 0.000059**
Production 38/39(k) = **0.012077 ± 0.000011**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**
Trapped 40/36(a) = **305.58 ± 2.48**
Trapped 38/36(a) = **0.1885 ± 0.0003**
Standard MDF 40/36(a) = **298.56 ± 0.31**
Standard MDF Reference = **Lee et al 2006**

Excess 40/36 = 305.58 ± 0.81 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		8.76190 ± 0.02471	**24.80 ± 0.08**	1.96	92.20	9.9 ± 1.1
Error Mean		± 0.28%	**± 0.34%**	0%	27	
		Full External Error ± 1.29		1.55	2σ Confidence Limit	
		Analytical Error ± 0.07		1.3986	Error Magnification	
Total Fusion Age		8.49417 ± 0.03503	**24.05 ± 0.11**		46	9.2 ± 0.9
		± 0.41%	**± 0.45%**			
		Full External Error ± 1.25				
		Analytical Error ± 0.10				
Normal Isochron	**305.80 ± 4.91**	8.75750 ± 0.04590	**24.79 ± 0.14**	2.59	92.20	
Error Chron	**± 1.61%**	± 0.52%	**± 0.55%**	0%	27	
		Full External Error ± 1.29		1.57	2σ Confidence Limit	
		Analytical Error ± 0.13		1.6107	Error Magnification	
Inverse Isochron	**305.58 ± 4.96**	8.76403 ± 0.04636	**24.81 ± 0.14**	2.62	92.20	
Error Chron	**± 1.62%**	± 0.53%	**± 0.56%**	0%	27	
		Full External Error ± 1.29		1.57	2σ Confidence Limit	
		Analytical Error ± 0.13		1.6188	Error Magnification	
				46%	Spreading Factor