EXP#22F05882 > AS23SEP21-6 > STEELY (21-32)
WESTERN CASCADES > NORTH BEND
22-OSU-01 (1B25-22) > Incremental Heating > Groundmass > Dan Miggins

Information on Analysis and Constants Used in Calculations

Project = **STEELY (21-32)**
Sample = **AS23SEP21-6**
Material = **Groundmass**
Location = **North Bend**
Region = **Western Cascades**
Analyst = **Dan Miggins**
Irradiation = **22-OSU-01 (1B25-22)**
Position = **X: 999 | Y: 999 | Z/H: 44.78046 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.80388 ± 0.00941**
FCT-NM J-value = **0.00158361 ± 0.00000152**
Air Shot 40Ar/36Ar = **299.8310 ± 0.3208**
Air Shot MDF = **0.99893887 ± 0.00037194 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **50 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-F**
Preferred Age = **Plateau Age**
Age Classification = **Eruption 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) = **329.35 ± 0.96**
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 = 329.35 ± 0.29 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		7.93393 ± 0.01016	**22.86 ± 0.05**	3.56	54.56	2.31 ± 0.23
Error Mean		± 0.13%	**± 0.23%**	0%	16	
		Full External Error ± 1.19		1.73	2σ Confidence Limit	
		Analytical Error ± 0.03		1.8881	Error Magnification	
Total Fusion Age		7.75533 ± 0.00530	**22.34 ± 0.05**		28	2.79 ± 0.00
		± 0.07%	**± 0.20%**			
		Full External Error ± 1.16				
		Analytical Error ± 0.02				
Normal Isochron	**332.47 ± 1.99**	7.91591 ± 0.01580	**22.80 ± 0.06**	3.83	54.56	
Error Chron	**± 0.60%**	± 0.20%	**± 0.28%**	0%	16	
		Full External Error ± 1.18		1.76	2σ Confidence Limit	
		Analytical Error ± 0.05		1.9570	Error Magnification	
Inverse Isochron	**332.71 ± 1.98**	7.91396 ± 0.01572	**22.80 ± 0.06**	3.80	54.56	
Error Chron	**± 0.60%**	± 0.20%	**± 0.27%**	0%	16	
		Full External Error ± 1.18		1.76	2σ Confidence Limit	
		Analytical Error ± 0.05		1.9486	Error Magnification	
				34%	Spreading Factor