EXP#22F06570 > AS19AUG21-1 > STEELY (21-32)
WESTERN CASCADES > NORTH BEND
22-OSU-01 (1B34-22) > Incremental Heating > Groundmass > Dan Miggins

Information on Analysis and Constants Used in Calculations

Project = **STEELY (21-32)**
Sample = **AS19AUG21-1**
Material = **Groundmass**
Location = **North Bend**
Region = **Western Cascades**
Analyst = **Dan Miggins**
Irradiation = **22-OSU-01 (1B34-22)**
Position = **X: 999 | Y: 999 | Z/H: 62.81902 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.21297 ± 0.00940**
FCT-NM J-value = **0.00152017 ± 0.00000140**
Air Shot 40Ar/36Ar = **299.6950 ± 0.3926**
Air Shot MDF = **0.99905198 ± 0.00041711 (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 = **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) = **314.82 ± 2.05**
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 = 314.82 ± 0.65 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.56683 ± 0.01708 (± 0.15%)	**31.91 ± 0.07 (± 0.23%)**	0.97	64.22	0.119 ± 0.004
		Full External Error ± 1.65		48%	15	
		Analytical Error ± 0.05		1.76	2σ Confidence Limit	
				1.0000	Error Magnification	
Total Fusion Age		11.08392 ± 0.01886 (± 0.17%)	**30.59 ± 0.08 (± 0.25%)**		28	0.129 ± 0.000
		Full External Error ± 1.59				
		Analytical Error ± 0.05				
Normal Isochron	**314.68 ± 4.12 (± 1.31%)**	11.56417 ± 0.05327 (± 0.46%)	**31.90 ± 0.16 (± 0.49%)**	2.65	64.22	
Error Chron		Full External Error ± 1.66		0%	15	
		Analytical Error ± 0.15		1.78	2σ Confidence Limit	
				1.6282	Error Magnification	
Inverse Isochron	**314.82 ± 4.10 (± 1.30%)**	11.56299 ± 0.05304 (± 0.46%)	**31.90 ± 0.16 (± 0.49%)**	2.65	64.22	
Error Chron		Full External Error ± 1.66		0%	15	
		Analytical Error ± 0.15		1.78	2σ Confidence Limit	
				1.6278	Error Magnification	
				19%	Spreading Factor