

EXP#22F07347 > MLM031A > POLENZ (21-26)
WESTERN CASCADES > SOUTHWESTERN WASHINGTON
22-OSU-01 (1B10-22) > Incremental Heating > Groundmass > Dan Miggins

**Information on Analysis
and Constants Used in Calculations**

Project = POLENZ (21-26)
Sample = MLM031A
Material = Groundmass
Location = Southwestern Washington
Region = Western Cascades
Analyst = Dan Miggins
Irradiation = 22-OSU-01 (1B10-22)
Position = X: 999 | Y: 999 | Z/H: 16.86517 mm
FCT-NM Age = 28.201 ± 0.023 Ma
FCT-NM Reference = Kuiper et al (2008)
FCT-NM 40Ar/39Ar Ratio = 9.46112 ± 0.00937
FCT-NM J-value = 0.00164098 ± 0.00000162
Air Shot 40Ar/36Ar = 299.8050 ± 0.3927
Air Shot MDF = 0.99896048 ± 0.00041696 (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) = 293.70 ± 1.52
Trapped 38/36(a) = 0.1885 ± 0.0003
Standard MDF 40/36(a) = 298.56 ± 0.31
Standard MDF Reference = Lee et al 2006

Sub-atmospheric 40/36 = 293.70 ± 0.52 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		0.38684 ± 0.00256 ± 0.66%	1161.6 ± 8.0 ± 0.69%	1.76 3%	50.82 16	0.274 ± 0.082
Error Mean			Full External Error ± 60.9 Analytical Error ± 7.7	1.73 1.3272	2σ Confidence Limit Error Magnification	
Total Fusion Age		0.38209 ± 0.00278 ± 0.73%	1147.4 ± 8.6 ± 0.75%		26	0.479 ± 0.000
			Full External Error ± 60.3 Analytical Error ± 8.3			
Normal Isochron	294.73 ± 2.17 ± 0.74%	0.38551 ± 0.00349 ± 0.90%	1157.6 ± 10.7 ± 0.93%	2.72 0%	50.82 16	
Error Chron			Full External Error ± 61.1 Analytical Error ± 10.5	1.76 1.6479	2σ Confidence Limit Error Magnification	
Inverse Isochron	294.80 ± 2.17 ± 0.74%	0.38558 ± 0.00346 ± 0.90%	1157.9 ± 10.7 ± 0.92%	2.72 0%	50.82 16	
Error Chron			Full External Error ± 61.1 Analytical Error ± 10.4	1.76 1.6504 70%	2σ Confidence Limit Error Magnification Spreading Factor	

