

Exhumation history of the Orocopia Schist and related rocks in the Gavilan Hills area of southeasternmost California

CARL E. JACOBSON¹, MARTY GROVE², MATTHEW M. STAMP¹, ANA VUCIC¹,
FELIX R. OYARZABAL¹, GORDON B. HAXEL³, RICHARD M. TOSDAL⁴, DAVID R. SHERROD⁵

¹*Department of Geological and Atmospheric Sciences, Iowa State University, Ames, Iowa 50011-3212, USA*

²*Department of Earth and Space Sciences and Institute of Geophysics and Planetary Physics, University of California, Los Angeles, California 90095, USA*

³*U.S. Geological Survey, 2255 North Gemini Drive, Flagstaff, Arizona 86001*

⁴*Department of Earth & Ocean Sciences, University of British Columbia, Vancouver, British Columbia V6T 1Z4, Canada*

⁵*U.S. Geological Survey, Hawaii National Park, Hawaii 96718-005*

ANALYTICAL METHODS

Concentrates of muscovite, biotite, and K-feldspar were purified using standard magnetic and density techniques. Grains were hand-selected under a binocular microscope, wrapped in Cu foil, sealed in evacuated quartz tubes, and irradiated for 45 hours in site L67 of the Ford Reactor at the University of Michigan. Fish Canyon sanidine (27.8 ± 0.3 Ma; McDougall and Harrison, 1999) was used as a flux monitor in the five separate irradiations employed. The relevant irradiation histories, J-factors, correction factors for neutron-induced interferences (determined from K_2SO_4 and CaF_2 included with each irradiation), backgrounds, and measurements of atmospheric argon used to calculate mass discrimination are included with the data tables. Sample gas was extracted using a double vacuum Ta furnace and purified with a 50 l/s SAES® ST-101 getter pump operated at 400°C. Step-heating protocols used for muscovite and biotite were similar to Jacobson (1990), whereas those used for K-feldspar are described in Lovera et al. (1997). $^{40}Ar/^{39}Ar$ isotopic measurements were performed using an automated VG 1200S mass spectrometer at UCLA (several samples from UM101 analyzed with the UCLA VG3600). Data were reduced using conventional decay constants and isotope abundances. A detailed explanation of the data reduction process is given in McDougall and Harrison (1999).

REFERENCES

- Lovera, O. M., Grove, M., Harrison, T. M., and Mahon, K. I., 1997, Systematic analysis of K-feldspar $^{40}Ar/^{39}Ar$ step-heating experiments I: Significance of activation energy determinations: *Geochimica et Cosmochimica Acta*, v. 61, p. 3171-3192.
- Jacobson, C. E., 1990, The $^{40}Ar/^{39}Ar$ geochronology of the Pelona Schist and related rocks, southern California: *Journal of Geophysical Research*, v. 95, p. 509-528.
- McDougall, I., and Harrison, T. M., 1999, *Geochronology and thermochronology by the $^{40}Ar/^{39}Ar$ method*, second edition: New York, Oxford University Press, 269 p.

GAVILAN HILLS ^{40}Ar / ^{39}Ar SAMPLES

Sample	UTM Coordinates ¹		hbd	Total Gas Age ²		ksp	Comment
	m	us		bip			
Orocopia Schist							
25B	712.332	3653.948			33.7 ± 0.4		late vein
30B	710.249	3653.954	56.8 ± 0.4				
94A	710.709	3655.254	57.4 ± 0.4				
138	712.942	3654.948		45.6 ± 0.3	32.9 ± 0.4		pre-CM F fabric
145	713.816	3653.629		45.0 ± 0.3	35.6 ± 0.4		mod. late fabric
148	713.357	3653.889		46.0 ± 0.3			mod. late fabric
149	713.269	3654.054		47.8 ± 0.2			pre-CM F fabric
246	711.453	3654.495		47.5 ± 0.4	40.1 ± 0.1		mod. CM F fabric
805 ³	710.599	3650.475		49.3 ± 0.2	34.7 ± 0.3		pre-CM F fabric
812 ³	712.258	3654.458	52.5 ± 1.3				pre-CM F fabric
825A	712.411	3654.550		47.0 ± 0.5			pre-CM F fabric
858	710.478	3655.268			42.3 ± 0.1		pre-CM F fabric
880A	711.229	3655.306	56.5 ± 0.4				
949	710.385	3654.538		47.7 ± 0.1	40.5 ± 0.1		pre-CM F fabric
973A	710.672	3654.387	52.1 ± 0.6				
989	711.239	3654.213		47.9 ± 0.6			strong CM F fabric
1021	711.697	3653.246		47.7 ± 0.3	31.8 ± 0.1		pre-CM F fabric
1026	711.528	3653.648		48.9 ± 0.3	32.7 ± 0.1		pre-CM F fabric
1049	711.862	3655.294	56.3 ± 0.7				
1090	710.957	3655.496		44.1 ± 0.8			strong CM F fabric
1376	713.666	3654.482			30.8 ± 0.1		green biotite
Gneiss							
82	710.418	3655.257		46.5 ± 0.4		32.5 ± 0.1	pre-CM F fabric
87	710.649	3655.383			44.5 ± 0.1		pre-CM F fabric
92A	710.800	3655.408			44.1 ± 0.1		pre-CM F fabric
120	710.712	3655.431		47.9 ± 0.1			mod. CM F fabric
158	709.678	3655.805	60.3 ± 0.2				
177C	711.178	3654.183		48.5 ± 0.7			strong CM F fabric
230	711.354	3655.504		49.5 ± 0.1		29.1 ± 0.2	mod. CM F fabric
814	710.809	3655.411	64.0 ± 0.4				
887	710.695	3655.563	58.8 ± 0.2				
921	713.539	3654.009			42.5 ± 0.3		mod late fabric
922	713.367	3653.992			43.1 ± 0.3		mod late fabric
991	711.103	3654.241			39.6 ± 0.1		mod. CM F fabric
1243	710.721	3655.598			35.6 ± 0.1		strong CM F fabric
1264	710.183	3655.540		48.0 ± 0.3			mod. CM F fabric

¹ All samples are on the Píacho SW, Calif.-Arizona and Píacho Peak, California 7.5' quads.

² Total gas ages and $\pm 1\sigma$ analytical errors calculated from steps weighted by moles of ^{39}Ar (only data above 990°C used for hornblende - see text)

³ Previously published results (Jacobson, 1990) included here for convenience.

25B BIDOTITE (4.0M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_\text{K}$ ² x10 ⁻²	$\Sigma^{39}\text{Ar}_\text{K}$ (mol)	$^{40}\text{Ar}^*$ ³ (%)	$^{40}\text{Ar}*/^{39}\text{Ar}_\text{K}$ ⁴ $\pm 1\sigma$	Age ⁵ $\pm 1\sigma$ (Ma)	$^{39}\text{Ar}_\text{K}/^{40}\text{Ar}$ ⁶ x10 ⁻²	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶ x10 ⁻⁴	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵								
1	500	10	165.5	27.96	94.62	5587	6.478	1.03	0.25	0.408 ± 1.263	5.66 ± 17.52	0.60 ± 0.00	33.76 ± 0.26
2	600	10	35.21	5.889	57.38	1146	5.909	1.98	3.74	1.318 ± 0.170	18.25 ± 2.34	2.84 ± 0.01	32.57 ± 0.16
3	680	5	18.33	3.120	108.3	558.9	17.98	4.85	9.78	1.795 ± 0.073	24.81 ± 1.00	5.46 ± 0.00	30.52 ± 0.13
4	740	11	8.084	1.979	20.07	195.0	66.28	15.4	28.4	2.297 ± 0.037	31.69 ± 0.50	12.41 ± 0.01	24.19 ± 0.15
5	780	10	5.176	1.638	12.68	86.91	62.85	25.5	49.8	2.583 ± 0.011	35.59 ± 0.15	19.42 ± 0.01	16.87 ± 0.07
6	840	14	4.423	1.562	18.54	60.93	58.72	34.9	58.6	2.599 ± 0.015	35.81 ± 0.20	22.74 ± 0.03	13.84 ± 0.11
7	900	11	4.493	1.686	24.22	68.58	47.74	42.5	54.2	2.442 ± 0.013	33.67 ± 0.18	22.39 ± 0.02	15.34 ± 0.10
8	1000	10	4.074	1.578	42.88	56.35	127.5	62.9	58.5	2.387 ± 0.007	32.91 ± 0.09	24.70 ± 0.01	13.89 ± 0.05
9	1100	11	3.496	1.387	14.84	33.91	144.3	85.9	70.6	2.470 ± 0.007	34.05 ± 0.10	28.81 ± 0.01	9.76 ± 0.07
10	1350	10	3.508	1.363	22.64	24.86	88.15	100	78.3	2.750 ± 0.010	37.87 ± 0.14	28.72 ± 0.03	7.12 ± 0.09

¹ Corrected for backgrounds (mean values in mol): m/e40 = 3.1×10^{-16} ; m/e39 = 3.6×10^{-17} ; m/e38 = 1.1×10^{-17} ; m/e37 = 1.3×10^{-17} ; m/e36 = 1.1×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_\text{ATM} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 10-31-2000)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_\text{a} = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_\text{ca} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_\text{ca} = 0.00086$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007714 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

30B Amphibole (23.2 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_{\text{K}}$ ²	$\Sigma^{39}\text{Ar}_{\text{K}}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}_{\text{K}}$ ⁴	Age ⁵	$^{39}\text{Ar}_{\text{K}}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶	
		x10 ⁻²		x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	750	10	20.44	7.623	0.5839	53.29	22.81	9.03	23.1	4.729 ± 0.121	56.04 ± 1.41	4.895 ± 0.010	26.01 ± 0.20
2	850	10	8.961	2.185	0.9078	20.51	8.125	12.2	32.9	2.960 ± 0.066	35.28 ± 0.78	11.18 ± 0.02	22.64 ± 0.25
3	950	10	6.309	1.820	4.982	11.71	21.58	20.8	51.7	3.282 ± 0.056	39.08 ± 0.66	15.85 ± 0.04	16.24 ± 0.29
4	990	16	6.494	1.669	9.704	10.05	32.44	33.6	67.1	4.396 ± 0.013	52.15 ± 0.15	15.34 ± 0.01	11.03 ± 0.06
5	1020	10	6.353	1.619	10.73	8.828	36.23	48.0	73.5	4.712 ± 0.021	55.84 ± 0.25	15.67 ± 0.03	8.860 ± 0.091
6	1050	10	7.060	1.639	10.72	10.78	23.03	57.1	67.9	4.841 ± 0.040	57.35 ± 0.47	14.09 ± 0.03	10.76 ± 0.18
7	1100	15	5.981	1.456	9.991	7.360	36.29	71.4	78.0	4.705 ± 0.029	55.77 ± 0.34	16.65 ± 0.06	7.322 ± 0.111
8	1150	10	9.596	1.865	10.59	18.53	24.89	81.3	52.4	5.077 ± 0.056	60.10 ± 0.65	10.36 ± 0.01	16.04 ± 0.19
9	1250	10	8.299	1.751	9.898	14.01	46.04	99.5	60.4	5.052 ± 0.018	59.80 ± 0.21	11.99 ± 0.02	13.34 ± 0.06
10	1450	15	26.01	3.006	9.946	75.01	1.270	100	17.9	4.739 ± 0.475	56.15 ± 5.54	3.819 ± 0.027	27.72 ± 0.60

¹Corrected for backgrounds (mean values in mol): m/e40 = 1.6×10^{-16} ; m/e39 = 9.4×10^{-17} ; m/e38 = 5.3×10^{-17} ; m/e37 = 8.2×10^{-17} ; m/e36 = 9.9×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-31-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_{\text{K}} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{Ca}} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{Ca}} = 0.00077$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.006672 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

94A Hornblende (21.0 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_{\text{K}}$ ²	$\Sigma^{39}\text{Ar}_{\text{K}}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}_{\text{K}}$ ⁴	Age ⁵	$^{39}\text{Ar}_{\text{K}}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶
		x10 ⁻²		x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$
									x10 ⁻²	x10 ⁻⁴		
1	750	10	32.24	16.23	3.711	91.69	7.886	4.33	16.9	5.464 ± 0.127	64.77 ± 1.48	3.095 ± 0.005
2	850	10	11.65	2.608	2.334	31.97	2.729	5.83	20.3	2.387 ± 0.337	28.58 ± 4.00	8.588 ± 0.036
3	950	10	6.211	1.729	7.119	9.846	9.196	10.9	62.7	3.932 ± 0.068	46.85 ± 0.80	16.07 ± 0.12
4	990	17	6.219	1.642	10.16	8.050	13.05	18.0	75.7	4.755 ± 0.051	56.50 ± 0.60	16.01 ± 0.07
5	1020	10	6.595	1.631	10.89	8.489	8.671	22.8	76.0	5.072 ± 0.075	60.20 ± 0.87	15.09 ± 0.05
6	1050	10	6.881	1.760	11.17	9.802	5.536	25.8	71.6	4.996 ± 0.128	59.31 ± 1.50	14.45 ± 0.02
7	1100	16	5.355	1.475	10.53	5.429	66.67	62.4	87.0	4.700 ± 0.012	55.85 ± 0.15	18.60 ± 0.01
8	1150	10	6.016	1.639	11.52	7.565	30.35	79.1	79.3	4.822 ± 0.017	57.28 ± 0.20	16.54 ± 0.02
9	1250	10	6.148	1.612	10.86	7.171	37.49	99.6	80.7	5.011 ± 0.015	59.49 ± 0.18	16.19 ± 0.02
10	1450	16	95.97	7.178	9.939	305.64	0.638	100	6.76	6.567 ± 2.359	77.57 ± 27.28	1.034 ± 0.017
												31.54 ± 0.80

¹Corrected for backgrounds (mean values in mol): m/e40 = 1.5×10^{-16} ; m/e39 = 9.4×10^{-17} ; m/e38 = 5.3×10^{-17} ; m/e37 = 8.2×10^{-17} ; m/e36 = 1.0×10^{-16} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-29-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_{\text{K}} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.00077$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.006690 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

138 MUSCOVITE (5.1 MG)

T (°C)	Time (min.)	⁴⁰ Ar/ ³⁹ Ar ¹	³⁸ Ar/ ³⁹ Ar ¹	³⁷ Ar/ ³⁹ Ar ¹	³⁶ Ar/ ³⁹ Ar ¹	³⁹ Ar _K ²	$\Sigma^{39}\text{Ar}_K$	⁴⁰ Ar ³	⁴⁰ Ar*/ ³⁹ Ar _K ⁴	Age ⁵	³⁹ Ar _K / ⁴⁰ Ar ⁶	³⁶ Ar/ ⁴⁰ Ar ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	10	39.39	11.38	370.6	1290	6.922	0.636	3.27	1.290 ± 0.338	16.54 ± 4.31	2.539 ± 0.012	32.73 ± 0.29
2	600	10	8.790	2.380	1140	218.8	14.78	2.00	27.2	2.393 ± 0.109	30.57 ± 1.38	11.40 ± 0.11	24.61 ± 0.35
3	680	10	5.163	1.454	2238	86.06	30.08	4.76	53.7	2.777 ± 0.085	35.43 ± 1.07	19.43 ± 0.05	15.58 ± 0.55
4	740	17	4.102	1.256	76.52	35.34	47.97	9.2	74.1	3.039 ± 0.035	38.74 ± 0.44	24.52 ± 0.18	8.617 ± 0.157
5	800	10	3.967	1.162	45.95	22.59	40.69	12.9	82.6	3.278 ± 0.041	41.75 ± 0.52	25.37 ± 0.04	5.700 ± 0.349
6	850	10	4.410	1.232	27.68	30.35	78.70	20.2	79.1	3.490 ± 0.024	44.42 ± 0.31	22.80 ± 0.04	6.905 ± 0.179
7	900	17	4.080	1.197	11.17	12.77	301.2	47.8	90.1	3.679 ± 0.010	46.79 ± 0.12	24.66 ± 0.05	3.141 ± 0.049
8	950	10	4.012	1.209	60.80	12.63	136.3	60.4	90.1	3.619 ± 0.022	46.04 ± 0.28	25.08 ± 0.11	3.126 ± 0.115
9	1000	10	4.035	1.187	14.22	10.26	210.6	79.7	91.8	3.708 ± 0.017	47.15 ± 0.21	24.94 ± 0.02	2.550 ± 0.138
10	1150	15	4.061	1.212	79.14	9.245	192.1	97.4	92.8	3.770 ± 0.015	47.93 ± 0.19	24.77 ± 0.07	2.238 ± 0.077
11	1350	10	4.670	1.279	547.8	29.51	28.20	100	81.6	3.818 ± 0.048	48.54 ± 0.60	21.52 ± 0.03	6.036 ± 0.345

¹ Corrected for backgrounds (mean values in mol:m/e40 = 1.5×10^{-16} ; m/e39 = 4.1×10^{-17} ; m/e38 = 1.7×10^{-17} ; m/e37 = 5.6×10^{-17} ; m/e36 = 3.2×10^{-17}), mass discrimination (measured ⁴⁰Ar/³⁶Ar_{ATM} = 293 ± 1), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-15-2001; Analyzed: 08-05-2001)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences (⁴⁰Ar/³⁹Ar_a = 0.0248; ³⁶Ar/³⁹Ar_a = 0.000268; ³⁹Ar/³⁷Ar_a = 0.000719)

⁵ Assumes trapped argon is atm atmospheric J-factor = 0.007142 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

138 Biotite (6.4 mg)

T (°C)	Time (min.)	${}^{40}\text{Ar}/{}^{39}\text{Ar}^1$	${}^{38}\text{Ar}/{}^{39}\text{Ar}^1$	${}^{37}\text{Ar}/{}^{39}\text{Ar}^1$	${}^{36}\text{Ar}/{}^{39}\text{Ar}^1$	${}^{39}\text{Ar}_K^2$	$\Sigma {}^{39}\text{Ar}_K$	${}^{40}\text{Ar}^3$	${}^{40}\text{Ar}^*/{}^{39}\text{Ar}_K^4$	Age ⁵	${}^{39}\text{Ar}_K/{}^{40}\text{Ar}^6$	${}^{36}\text{Ar}/{}^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	10	23.38	8.195	96.93	743.5	16.39	1.59	5.96	1.397 ± 0.441	17.90 ± 5.63	4.281 ± 0.034	31.82 ± 0.63
2	600	10	5.834	1.810	260.0	143.5	59.48	7.35	27.2	1.590 ± 0.090	20.36 ± 1.15	17.21 ± 0.05	24.58 ± 0.52
3	680	11	4.228	1.388	246.7	64.77	150.9	22.0	54.6	2.309 ± 0.040	29.50 ± 0.50	23.79 ± 0.02	15.25 ± 0.32
4	740	18	3.661	1.249	17.74	32.14	155.1	37.0	73.4	2.688 ± 0.013	34.28 ± 0.17	27.50 ± 0.05	8.825 ± 0.111
5	780	10	3.733	1.282	19.04	32.51	46.56	41.5	73.4	2.749 ± 0.068	35.05 ± 0.86	26.97 ± 0.10	8.753 ± 0.611
6	840	10	3.804	1.262	15.04	39.11	83.88	49.7	68.9	2.624 ± 0.025	33.48 ± 0.31	26.46 ± 0.05	10.34 ± 0.21
7	900	19	3.892	1.267	23.48	38.42	121.0	61.4	70.2	2.734 ± 0.022	34.87 ± 0.28	25.86 ± 0.13	9.917 ± 0.108
8	1000	10	3.669	1.247	37.86	33.81	199.0	80.7	72.1	2.648 ± 0.012	33.78 ± 0.15	27.44 ± 0.02	9.252 ± 0.105
9	1100	10	3.485	1.219	17.01	25.73	181.6	98.3	77.4	2.701 ± 0.018	34.45 ± 0.22	28.90 ± 0.03	7.424 ± 0.169
10	1350	19	6.620	1.357	493.1	65.77	17.71	100	70.6	4.692 ± 0.092	59.44 ± 1.14	15.16 ± 0.08	9.772 ± 0.440

¹ Corrected for backgrounds (mean values in mol): m/e40 = 7.4×10^{-17} ; m/e39 = 2.1×10^{-17} ; m/e38 = 8.3×10^{-18} ; m/e37 = 2.8×10^{-17} ; m/e36 = 1.6×10^{-17} , mass discrimination (measured ${}^{40}\text{Ar}/{}^{36}\text{Ar}_{\text{ATM}} = 282.6 \pm 1.4$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-15-2001; Analyzed: 07-31-2001)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences (${}^{40}\text{Ar}/{}^{39}\text{Ar}_K = 0.0248$; ${}^{36}\text{Ar}/{}^{39}\text{Ar}_{\text{ca}} = 0.000268$; ${}^{39}\text{Ar}/{}^{37}\text{Ar}_{\text{ca}} = 0.000719$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007138 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

145 Muscovite (5.8m g)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_k^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	± 1σ	± 1σ (Ma)	± 1σ	x10 ⁻²	x10 ⁻⁴
1	500	10	29.10	8.387	159.5	918.0	5.534	0.65	6.72	1.960 ± 0.537	25.11 ± 6.83	3.44 ± 0.02	31.56 ± 0.62
2	600	12	9.247	1.869	375.3	235.2	10.58	1.89	24.7	2.302 ± 0.116	29.46 ± 1.47	10.84 ± 0.03	25.39 ± 0.42
3	680	10	4.474	1.304	586.9	64.57	20.94	4.34	57.4	2.588 ± 0.133	33.09 ± 1.68	22.47 ± 0.11	14.16 ± 1.00
4	740	16	4.012	1.267	43.23	36.27	32.81	8.17	72.4	2.919 ± 0.035	37.27 ± 0.45	25.08 ± 0.05	9.07 ± 0.29
5	780	10	4.201	1.303	35.75	37.31	23.07	10.9	72.9	3.076 ± 0.063	39.26 ± 0.79	23.95 ± 0.05	8.91 ± 0.50
6	820	10	4.417	1.195	18.74	30.01	53.01	17.1	79.3	3.507 ± 0.021	44.69 ± 0.26	22.77 ± 0.08	6.82 ± 0.11
7	850	17	4.048	1.227	12.25	11.68	141.8	33.7	90.9	3.679 ± 0.012	46.85 ± 0.15	24.85 ± 0.01	2.90 ± 0.10
8	880	10	3.927	1.231	19.76	9.882	76.58	42.6	91.9	3.612 ± 0.014	46.01 ± 0.18	25.63 ± 0.06	2.52 ± 0.09
9	940	10	3.780	1.219	61.90	8.714	128.7	57.7	92.6	3.503 ± 0.011	44.63 ± 0.14	26.63 ± 0.05	2.28 ± 0.08
10	1000	17	3.943	1.198	84.89	13.16	129.0	72.8	89.6	3.537 ± 0.016	45.06 ± 0.20	25.52 ± 0.03	3.30 ± 0.13
11	1150	10	3.997	1.195	79.25	9.326	192.7	95.3	92.6	3.703 ± 0.014	47.15 ± 0.17	25.17 ± 0.07	2.29 ± 0.08
12	1350	10	4.462	1.266	199.8	19.40	40.00	100	86.9	3.881 ± 0.046	49.38 ± 0.58	22.53 ± 0.13	4.25 ± 0.29

¹Corrected for backgrounds (mean values in mol): m/e40 = 2.0×10^{-16} ; m/e39 = 5.1×10^{-17} ; m/e38 = 2.2×10^{-17} ; m/e37 = 6.3×10^{-17} ; m/e36 = 3.2×10^{-17} , mass discrimination measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 293 \pm 1$, abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-15-2001; Analyzed: 08-03-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_k = 0.0248$; $^{36}\text{Ar}/^{39}\text{Ar}_k = 0.000268$; $^{39}\text{Ar}/^{37}\text{Ar}_k = 0.000719$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.007151 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

145 B D TITE (5.7M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	^{39}Ar ²	$\Sigma^{39}\text{Ar}$	^{40}Ar ³	$^{40}\text{Ar}/^{39}\text{Ar}$ ⁴	Age ⁵	$^{39}\text{Ar}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	10	25.38	9.132	157.8	817.3	9.180	1.49	4.82	1.223 ± 0.315	15.69 ± 4.03	3.94 ± 0.03	32.21 ± 0.41
2	600	10	7.073	1.951	149.1	180.6	33.81	6.96	24.4	1.725 ± 0.120	22.09 ± 1.53	14.19 ± 0.06	25.56 ± 0.57
3	680	10	4.495	1.427	100.8	66.80	73.14	18.8	55.7	2.504 ± 0.041	31.99 ± 0.51	22.37 ± 0.07	14.88 ± 0.29
4	740	15	3.793	1.307	9.299	32.18	89.81	33.4	74.3	2.818 ± 0.032	35.97 ± 0.40	26.54 ± 0.05	8.53 ± 0.28
5	780	10	3.847	1.258	7.578	30.91	36.25	39.2	75.5	2.909 ± 0.030	37.11 ± 0.38	26.17 ± 0.04	8.08 ± 0.26
6	840	10	4.001	1.328	16.15	32.94	50.53	47.4	75.0	3.005 ± 0.021	38.32 ± 0.26	25.15 ± 0.04	8.27 ± 0.16
7	900	18	4.017	1.286	35.81	30.47	82.87	60.8	77.0	3.094 ± 0.020	39.45 ± 0.26	25.05 ± 0.05	7.61 ± 0.16
8	1000	10	3.692	1.262	88.60	27.52	103.6	77.6	77.5	2.861 ± 0.018	36.51 ± 0.22	27.26 ± 0.05	7.44 ± 0.15
9	1100	10	3.442	1.258	41.43	18.71	114.4	96.1	83.3	2.868 ± 0.019	36.59 ± 0.24	29.26 ± 0.06	5.44 ± 0.18
10	1350	16	5.005	1.360	802.4	60.72	23.79	100	64.8	3.251 ± 0.045	41.42 ± 0.56	20.07 ± 0.10	11.76 ± 0.26

¹Corrected for backgrounds (mean values in mol): m/e40 = 7.7×10^{-17} ; m/e39 = 4.8×10^{-17} ; m/e38 = 2.2×10^{-17} ; m/e37 = 6.4×10^{-17} ; m/e36 = 3.1×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 293 \pm 1$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-15-2001; Analyzed: 08-03-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar} = 0.0248$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.000268$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.000719$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.007145 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

148 MUSCOVITE (6.0M G)

T (°C)	Time (min.)	⁴⁰ Ar/ ³⁹ Ar ¹	³⁸ Ar/ ³⁹ Ar ¹	³⁷ Ar/ ³⁹ Ar ¹	³⁶ Ar/ ³⁹ Ar ¹	³⁹ Ar _K ²	$\Sigma^{39}\text{Ar}_K$	⁴⁰ Ar ³	⁴⁰ Ar*/ ³⁹ Ar _K ⁴	Age ⁵	³⁹ Ar _K / ⁴⁰ Ar ⁶	³⁶ Ar/ ⁴⁰ Ar ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	21	35.75	13.56	179.0	1138	6.756	0.73	5.87	2.099 ± 0.672	26.88 ± 8.54	2.80 ± 0.03	31.85 ± 0.63
2	600	20	7.039	1.906	300.3	146.8	16.82	2.54	38.3	2.702 ± 0.053	34.53 ± 0.68	14.25 ± 0.03	20.81 ± 0.25
3	680	14	4.416	1.391	160.7	53.84	36.91	6.53	63.7	2.813 ± 0.070	35.94 ± 0.88	22.77 ± 0.07	12.16 ± 0.53
4	740	19	4.478	1.240	59.18	45.29	38.05	10.6	69.6	3.120 ± 0.037	39.82 ± 0.47	22.45 ± 0.09	10.13 ± 0.25
5	800	15	4.815	1.271	41.80	47.91	49.43	16.0	70.1	3.378 ± 0.065	43.08 ± 0.82	20.87 ± 0.07	9.98 ± 0.45
6	850	13	5.219	1.300	31.10	54.48	64.14	22.9	68.7	3.586 ± 0.037	45.70 ± 0.46	19.25 ± 0.05	10.47 ± 0.22
7	900	14	4.421	1.235	12.64	23.03	206.0	45.1	84.1	3.717 ± 0.010	47.35 ± 0.13	22.75 ± 0.02	5.23 ± 0.07
8	950	10	4.382	1.215	32.91	23.60	122.8	58.4	83.6	3.662 ± 0.008	46.65 ± 0.10	22.95 ± 0.02	5.40 ± 0.05
9	1000	26	4.366	1.228	8.757	20.54	203.4	80.3	85.5	3.735 ± 0.004	47.57 ± 0.06	23.04 ± 0.02	4.73 ± 0.02
10	1150	16	4.517	1.281	65.91	26.67	78.73	88.8	82.1	3.709 ± 0.032	47.25 ± 0.40	22.26 ± 0.08	5.90 ± 0.21
11	1350	20	4.690	1.267	81.57	26.89	103.8	100	82.6	3.877 ± 0.017	49.36 ± 0.22	21.44 ± 0.04	5.72 ± 0.11

¹ Corrected for backgrounds (mean values in mol): m/e40 = 5.2×10^{-17} ; m/e39 = 4.3×10^{-17} ; m/e38 = 1.8×10^{-17} ; m/e37 = 5.8×10^{-17} ; m/e36 = 3.3×10^{-17} , mass discrimination (measured ⁴⁰Ar/³⁶Ar_{ATM} = 293 ± 1), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-15-2001; Analyzed: 08-04-2001)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences (⁴⁰Ar/³⁹Ar_a = 0.0248; ³⁶Ar/³⁹Ar_a = 0.000268; ³⁹Ar/³⁷Ar_a = 0.000719)

⁵ Assumes trapped argon is atm ospheric. J-factor = 0.007154 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

149 MUSCOVITE (6.2M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$	$^{38}\text{Ar}/^{39}\text{Ar}$	$^{37}\text{Ar}/^{39}\text{Ar}$	$^{36}\text{Ar}/^{39}\text{Ar}$	$^{39}\text{Ar}_\text{K}$	$\Sigma^{39}\text{Ar}_\text{K}$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}^*/^{39}\text{Ar}_\text{K}^4$	Age ⁵	$^{39}\text{Ar}_\text{K}/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	11	29.67	6.224	100.6	949.5	6.466	0.50	5.36	1.593 ± 0.324	20.46 ± 4.14	3.37 ± 0.02	32.02 ± 0.37
2	600	10	7.665	1.651	276.1	178.3	14.84	1.64	31.2	2.393 ± 0.254	30.64 ± 3.22	13.09 ± 0.09	23.24 ± 1.11
3	680	10	4.766	1.352	325.2	55.50	27.58	3.76	65.5	3.128 ± 0.065	39.95 ± 0.82	21.09 ± 0.10	11.52 ± 0.44
4	740	18	4.338	1.242	19.11	31.62	43.22	7.09	77.9	3.380 ± 0.049	43.13 ± 0.62	23.19 ± 0.03	7.32 ± 0.38
5	800	10	4.389	1.212	11.15	28.37	39.51	10.1	80.3	3.526 ± 0.035	44.97 ± 0.45	22.91 ± 0.03	6.49 ± 0.27
6	850	10	5.246	1.287	15.73	52.72	79.77	16.3	69.8	3.665 ± 0.023	46.72 ± 0.30	19.15 ± 0.07	10.09 ± 0.10
7	900	16	4.489	1.229	2.610	20.92	374.6	45.1	85.7	3.846 ± 0.013	49.00 ± 0.16	22.40 ± 0.05	4.68 ± 0.06
8	950	10	4.296	1.216	8.138	18.37	143.3	56.1	86.8	3.729 ± 0.008	47.53 ± 0.10	23.41 ± 0.02	4.29 ± 0.05
9	1000	10	4.293	1.202	2.813	15.34	205.9	72.0	88.8	3.815 ± 0.009	48.61 ± 0.11	23.43 ± 0.03	3.59 ± 0.05
10	1150	16	4.130	1.196	11.37	9.596	255.8	91.7	92.5	3.823 ± 0.008	48.70 ± 0.10	24.36 ± 0.04	2.33 ± 0.03
11	1350	10	4.109	1.194	14.69	7.029	108.4	100	94.3	3.878 ± 0.012	49.39 ± 0.15	24.48 ± 0.02	1.71 ± 0.10

¹ Corrected for backgrounds (mean values in mol:m/e40 = 1.2×10^{-16} ; m/e39 = 4.1×10^{-17} ; m/e38 = 1.8×10^{-17} ; m/e37 = 5.4×10^{-17} ; m/e36 = 3.1×10^{-17}), mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_\text{ATM} = 293 \pm 1$), abundance sensitivity (5 ppm), and radiative decay (Irradiated: 02-15-2001; Analyzed: 08-05-2001)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_\text{K} = 0.0248$; $^{36}\text{Ar}/^{39}\text{Ar}_\text{K,a} = 0.000268$; $^{39}\text{Ar}/^{37}\text{Ar}_\text{K,a} = 0.000719$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007158 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

246 MUSCOVITE (2.6M G)

T (°C)	Time (min.)	⁴⁰ Ar/ ³⁹ Ar ¹	³⁸ Ar/ ³⁹ Ar ¹	³⁷ Ar/ ³⁹ Ar ¹	³⁶ Ar/ ³⁹ Ar ¹	³⁹ Ar _K ²	$\Sigma^{39}\text{Ar}_K$	⁴⁰ Ar ³	⁴⁰ Ar*/ ³⁹ Ar _K ⁴	Age ⁵	³⁹ Ar _K / ⁴⁰ Ar ⁶	³⁶ Ar/ ⁴⁰ Ar ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	15	22.29	162.1	288.9	660.0	2.416	0.59	12.3	2.782 ± 0.562	32.34 ± 6.48	4.49 ± 0.05	29.61 ± 0.83
2	600	18	7.466	2.128	1092	137.8	3.414	1.43	44.7	3.452 ± 0.324	40.05 ± 3.72	13.43 ± 0.14	18.15 ± 1.44
3	700	18	4.334	1.322	77.42	22.05	12.02	4.38	83.2	3.664 ± 0.087	42.47 ± 1.00	23.20 ± 0.10	5.07 ± 0.67
4	800	13	4.266	1.255	14.61	13.89	25.14	10.5	89.1	3.832 ± 0.042	44.39 ± 0.48	23.58 ± 0.05	3.27 ± 0.33
5	850	15	4.423	1.217	6.014	14.06	74.65	28.8	89.8	3.982 ± 0.016	46.12 ± 0.18	22.74 ± 0.03	3.19 ± 0.11
6	900	15	4.374	1.232	3.204	8.073	52.49	41.7	93.6	4.110 ± 0.020	47.58 ± 0.23	22.99 ± 0.03	1.85 ± 0.15
7	950	20	4.350	1.203	5.685	8.493	41.41	51.9	93.2	4.075 ± 0.029	47.17 ± 0.33	23.12 ± 0.07	1.96 ± 0.20
8	1000	17	4.403	1.225	5.696	8.764	38.23	61.2	93.1	4.119 ± 0.027	47.68 ± 0.31	22.84 ± 0.04	2.00 ± 0.20
9	1050	19	4.425	1.233	4.564	7.809	49.16	73.3	93.9	4.170 ± 0.022	48.26 ± 0.25	22.73 ± 0.03	1.77 ± 0.16
10	1150	15	4.493	1.232	5.505	6.242	104.5	98.9	95.2	4.284 ± 0.011	49.56 ± 0.12	22.38 ± 0.02	1.39 ± 0.07
11	1300	10	6.048	1.489	130.6	38.58	4.465	100	78.4	4.893 ± 0.234	56.50 ± 2.66	16.60 ± 0.15	6.35 ± 1.28

¹ Corrected for backgrounds (mean values in mol): m/e40 = 5.4×10^{-16} ; m/e39 = 8.1×10^{-17} ; m/e38 = 2.4×10^{-17} ; m/e37 = 2.0×10^{-17} ; m/e36 = 1.8×10^{-17} , mass discrimination (measured ⁴⁰Ar/³⁶Ar_{ATM} = 296 ± 0.5), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-18-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences (⁴⁰Ar/³⁹Ar_a = 0.025; ³⁶Ar/³⁹Ar_a = 0.00025; ³⁹Ar/³⁷Ar_a = 0.0007)

⁵ Assumes trapped argon is atm atmospheric J-factor = 0.006502 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

246 B D TITE (5.8M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	42	15.23	10.26	94.36	479.6	6.794	0.66	6.82	1.044 ± 0.075	14.45 ± 1.03	6.57 ± 0.01	31.52 ± 0.17
2	600	11	4.686	1.658	97.79	102.8	9.080	1.53	34.4	1.632 ± 0.079	22.52 ± 1.08	21.45 ± 0.13	22.00 ± 0.55
3	680	24	3.520	1.364	82.11	32.25	94.07	10.6	72.3	2.548 ± 0.010	35.05 ± 0.13	28.61 ± 0.02	9.17 ± 0.09
4	740	19	3.273	1.278	7.637	12.42	123.2	22.5	87.9	2.881 ± 0.007	39.58 ± 0.09	30.80 ± 0.02	3.82 ± 0.06
5	780	17	3.296	1.258	5.804	8.53	94.81	31.6	91.4	3.019 ± 0.011	41.46 ± 0.14	30.58 ± 0.01	2.60 ± 0.11
6	840	13	3.409	1.258	8.587	10.72	52.02	36.7	89.7	3.068 ± 0.018	42.12 ± 0.25	29.55 ± 0.01	3.16 ± 0.18
7	900	24	3.500	1.278	11.52	15.05	65.38	43.0	86.4	3.031 ± 0.008	41.62 ± 0.10	28.78 ± 0.05	4.32 ± 0.05
8	1000	8	3.417	1.275	13.45	15.88	71.31	49.9	85.4	2.923 ± 0.013	40.15 ± 0.18	29.49 ± 0.01	4.67 ± 0.13
9	1100	11	3.166	1.255	5.239	7.742	293.8	78.2	91.9	2.913 ± 0.004	40.01 ± 0.05	31.84 ± 0.03	2.46 ± 0.02
10	1350	16	3.322	1.248	17.19	6.536	225.8	100	93.3	3.105 ± 0.011	42.63 ± 0.15	30.33 ± 0.02	1.97 ± 0.11

¹Corrected for backgrounds (mean values in mol): m/e40 = 3.4×10^{-16} ; m/e39 = 5.5×10^{-17} ; m/e38 = 1.8×10^{-17} ; m/e37 = 1.7×10^{-17} ; m/e36 = 1.6×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 09-29-2000)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{Ca}} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{Ca}} = 0.00086$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.0077 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

825A MUSCOVITE (1.6M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_{\text{K}}$ ²	$\Sigma^{39}\text{Ar}_{\text{K}}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}_{\text{K}}$ ⁴	Age ⁵	$^{39}\text{Ar}_{\text{K}}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	11	21.47	141.0	472.8	632.9	1.274	0.49	12.5	2.776 ± 1.012	32.29 ± 11.67	4.66 ± 0.10	29.46 ± 1.56
2	600	10	9.365	22.18	1570	199.2	1.789	1.18	36.3	3.575 ± 0.609	41.49 ± 6.98	10.69 ± 0.18	20.90 ± 2.16
3	700	13	5.294	1.310	1474	67.64	3.279	2.44	60.8	3.382 ± 0.354	39.27 ± 4.07	18.96 ± 0.23	12.14 ± 2.24
4	780	10	4.113	1.207	22.65	15.49	12.64	7.31	86.9	3.632 ± 0.085	42.14 ± 0.97	24.46 ± 0.11	3.77 ± 0.68
5	850	10	4.111	1.129	7.473	7.689	10.16	11.2	92.0	3.859 ± 0.119	44.74 ± 1.36	24.47 ± 0.12	1.88 ± 0.97
6	860	18	4.237	1.208	5.043	10.13	19.11	18.6	91.4	3.913 ± 0.055	45.36 ± 0.63	23.74 ± 0.06	2.40 ± 0.44
7	900	56	4.404	1.211	2.008	9.683	69.42	45.3	92.7	4.093 ± 0.016	47.42 ± 0.18	22.84 ± 0.02	2.21 ± 0.12
8	1000	29	4.302	1.217	1.936	5.331	102.5	84.8	95.6	4.119 ± 0.011	47.72 ± 0.13	23.38 ± 0.02	1.25 ± 0.08
9	1100	10	4.334	1.210	3.241	4.093	33.22	97.6	96.1	4.189 ± 0.035	48.51 ± 0.39	23.21 ± 0.05	0.95 ± 0.26
10	1300	10	4.791	1.123	111.1	12.58	6.358	100	89.4	4.402 ± 0.174	50.95 ± 1.99	20.98 ± 0.14	2.58 ± 1.22

¹Corrected for backgrounds (mean values in mol): m/e40 = 5.5×10^{-16} ; m/e39 = 8.3×10^{-17} ; m/e38 = 2.5×10^{-17} ; m/e37 = 2.1×10^{-17} ; m/e36 = 1.8×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-17-1999)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_{\text{K}} = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.0007$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.006507 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

858 B D TITE (4.6M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	^{39}Ar ²	$\Sigma^{39}\text{Ar}$	^{40}Ar ³	$^{40}\text{Ar}/^{39}\text{Ar}$ ⁴	Age ⁵	$^{39}\text{Ar}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	17	15.19	22.82	90.38	470.1	5.562	0.70	8.41	1.285 ± 0.109	17.80 ± 1.50	6.59 ± 0.01	30.97 ± 0.24
2	600	14	6.253	2.686	45.90	138.8	9.822	1.93	33.8	2.129 ± 0.055	29.40 ± 0.76	16.06 ± 0.01	22.27 ± 0.30
3	680	11	4.457	1.555	21.08	56.00	43.95	7.45	62.2	2.779 ± 0.016	38.29 ± 0.22	22.56 ± 0.02	12.62 ± 0.12
4	740	18	3.530	1.314	10.34	16.60	130.0	23.8	85.3	3.015 ± 0.005	41.50 ± 0.07	28.54 ± 0.02	4.73 ± 0.04
5	780	25	3.442	1.295	9.575	9.009	126.0	39.6	91.4	3.152 ± 0.003	43.36 ± 0.04	29.26 ± 0.01	2.63 ± 0.02
6	840	24	3.499	1.366	25.19	10.61	57.64	46.8	90.1	3.162 ± 0.008	43.51 ± 0.11	28.79 ± 0.01	3.03 ± 0.07
7	900	19	3.651	1.337	33.80	17.53	29.58	50.5	84.8	3.111 ± 0.016	42.81 ± 0.22	27.58 ± 0.04	4.81 ± 0.14
8	1000	35	3.402	1.297	30.46	11.80	119.0	65.5	89.0	3.030 ± 0.007	41.71 ± 0.09	29.62 ± 0.03	3.47 ± 0.05
9	1100	14	3.306	1.267	35.01	7.749	109.9	79.2	92.3	3.055 ± 0.004	42.04 ± 0.06	30.48 ± 0.02	2.33 ± 0.04
10	1350	11	3.517	1.266	82.10	7.719	165.3	100	92.9	3.270 ± 0.003	44.97 ± 0.04	28.64 ± 0.01	2.15 ± 0.02

¹Corrected for backgrounds (mean values in mol): m/e40 = 3.2×10^{-16} ; m/e39 = 4.8×10^{-17} ; m/e38 = 1.5×10^{-17} ; m/e37 = 1.6×10^{-17} ; m/e36 = 1.4×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 10-01-2000)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar} = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.00086$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.007719 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

880A Hornblende (20.2 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_\text{K}$ ²	$\Sigma^{39}\text{Ar}_\text{K}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}_\text{K}$ ⁴	Age ⁵	$^{39}\text{Ar}_\text{K}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶	
		x10 ⁻²		x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	750	10	64.36	34.65	3.998	187.7	6.480	2.59	14.35	9.269 ± 0.328	108.37 ± 3.72	1.549 ± 0.005	28.98 ± 0.16
2	850	10	15.57	4.214	3.112	45.83	3.113	3.83	14.58	2.290 ± 0.173	27.38 ± 2.06	6.415 ± 0.013	28.87 ± 0.37
3	950	10	6.990	2.217	8.128	12.60	20.11	11.9	56.62	3.991 ± 0.038	47.46 ± 0.44	14.26 ± 0.01	14.58 ± 0.18
4	990	14	6.372	1.821	8.302	8.553	47.75	31.0	71.47	4.587 ± 0.015	54.45 ± 0.17	15.65 ± 0.01	9.548 ± 0.077
5	1020	10	6.818	1.784	8.350	9.620	45.45	49.1	68.78	4.724 ± 0.029	56.04 ± 0.34	14.62 ± 0.00	10.47 ± 0.15
6	1050	10	7.520	1.775	8.490	12.06	23.42	58.5	62.23	4.718 ± 0.035	55.97 ± 0.40	13.25 ± 0.01	12.69 ± 0.15
7	1100	14	7.127	1.672	8.762	10.66	11.96	63.3	66.18	4.763 ± 0.065	56.50 ± 0.76	13.98 ± 0.03	11.31 ± 0.30
8	1150	10	11.02	2.325	9.454	22.84	35.71	77.5	46.13	5.124 ± 0.031	60.71 ± 0.36	9.028 ± 0.007	18.19 ± 0.09
9	1250	10	9.461	2.029	8.397	17.58	55.68	99.8	52.70	5.021 ± 0.036	59.51 ± 0.42	10.53 ± 0.01	15.95 ± 0.12
10	1450	14	51.54	4.232	8.291	157.8	0.5547	100	10.81	5.661 ± 1.662	66.95 ± 19.30	1.929 ± 0.017	30.15 ± 1.08

¹ Corrected for backgrounds (mean values in mol): m/e40 = 1.8×10^{-16} ; m/e39 = 9.7×10^{-17} ; m/e38 = 5.3×10^{-17} ; m/e37 = 8.4×10^{-17} ; m/e36 = 1.0×10^{-16} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_\text{ATM} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-31-2001)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_\text{a} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_\text{ca} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_\text{ca} = 0.00077$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.006679 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

949 MUSCOVITE (6.6M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_k^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$
											x10 ⁻²	x10 ⁻⁴
1	500	11	19.73	167.0	199.3	605.6	3.534	0.36	9.17	1.827 ± 0.300	21.33 ± 3.48	5.07 ± 0.04
2	600	13	7.266	6.385	153.6	148.9	4.277	0.80	38.4	2.854 ± 0.200	33.21 ± 2.31	13.81 ± 0.07
3	700	10	4.569	1.459	77.05	39.32	13.63	2.20	73.3	3.388 ± 0.062	39.36 ± 0.72	22.01 ± 0.07
4	800	12	4.203	1.278	13.98	15.99	42.35	6.55	87.9	3.706 ± 0.017	43.01 ± 0.19	23.94 ± 0.02
5	850	11	4.273	1.245	8.977	14.54	40.05	10.7	89.0	3.819 ± 0.025	44.30 ± 0.28	23.54 ± 0.03
6	900	10	4.535	1.246	5.630	20.04	61.56	17.0	86.2	3.918 ± 0.013	45.44 ± 0.15	22.17 ± 0.02
7	950	16	4.587	1.234	1.796	13.56	205.1	38.0	90.6	4.162 ± 0.008	48.23 ± 0.09	21.92 ± 0.03
8	1000	10	4.437	1.221	4.166	10.43	137.2	52.1	92.4	4.104 ± 0.007	47.57 ± 0.08	22.67 ± 0.02
9	1050	14	4.446	1.213	1.597	7.695	223.8	75.1	94.2	4.194 ± 0.007	48.60 ± 0.08	22.62 ± 0.01
10	1150	10	4.450	1.215	4.115	5.223	195.5	95.2	95.9	4.271 ± 0.008	49.48 ± 0.09	22.60 ± 0.03
11	1350	10	5.211	1.280	72.19	29.73	46.87	100	82.5	4.313 ± 0.017	49.95 ± 0.20	19.28 ± 0.02
												5.70 ± 0.10

¹ Corrected for backgrounds (mean values in mol): m/e40 = 4.4×10^{-16} ; m/e39 = 2.4×10^{-16} ; m/e38 = 6.4×10^{-17} ; m/e37 = 5.0×10^{-17} ; m/e36 = 2.3×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-26-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_k = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.0007$)

⁵ Assumes trapped argon is atm ospheric. J-factor = 0.00651 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

949 B D TITE (5.5M G)

T (°C)	Time (m in.)	⁴⁰ Ar/ ³⁹ Ar ¹	³⁸ Ar/ ³⁹ Ar ¹	³⁷ Ar/ ³⁹ Ar ¹	³⁶ Ar/ ³⁹ Ar ¹	³⁹ Ar _K ²	$\Sigma^{39}\text{Ar}_K$	⁴⁰ Ar ³	⁴⁰ Ar*/ ³⁹ Ar _K ⁴	Age ⁵	³⁹ Ar _K / ⁴⁰ Ar ⁶	³⁶ Ar/ ⁴⁰ Ar ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	10	12.03	85.64	131.8	364.1	3.548	0.42	10.2	12.58 ± 0.323	14.73 ± 3.77	8.33 ± 0.11	30.29 ± 0.89
2	600	10	5.717	2.017	79.45	118.1	6.487	1.19	37.4	22.07 ± 0.130	25.76 ± 1.51	17.57 ± 0.19	20.72 ± 0.72
3	700	15	4.137	1.308	8.285	28.37	97.83	12.8	78.9	3.274 ± 0.010	38.07 ± 0.12	24.32 ± 0.03	6.90 ± 0.08
4	800	10	3.728	1.225	2.180	5.855	157.7	31.5	94.5	3.531 ± 0.006	41.03 ± 0.07	27.00 ± 0.03	1.58 ± 0.04
5	850	20	3.850	1.231	2.779	9.296	75.24	40.5	91.8	3.550 ± 0.010	41.26 ± 0.12	26.14 ± 0.04	2.43 ± 0.07
6	900	12	3.818	1.253	3.295	8.980	40.54	45.3	91.7	3.528 ± 0.026	41.00 ± 0.30	26.36 ± 0.08	2.37 ± 0.20
7	950	13	3.855	1.249	4.763	11.067	56.14	51.9	90.4	3.504 ± 0.018	40.72 ± 0.21	26.11 ± 0.05	2.89 ± 0.15
8	1000	10	3.721	1.231	3.309	7.790	84.36	62.0	92.8	3.466 ± 0.010	40.29 ± 0.11	27.05 ± 0.04	2.11 ± 0.07
9	1100	10	3.701	1.223	1.677	5.387	207.7	86.6	94.9	3.517 ± 0.006	40.87 ± 0.07	27.20 ± 0.03	1.46 ± 0.04
10	1200	7	3.796	1.243	7.292	5.558	109.1	99.6	94.7	3.608 ± 0.009	41.91 ± 0.10	26.52 ± 0.03	1.47 ± 0.07
11	1350	6	7.592	2.120	98.09	127.4	3.666	100	48.0	3.810 ± 0.206	44.23 ± 2.36	13.21 ± 0.19	16.80 ± 0.82

¹ Corrected for backgrounds (mean values in mol:m/e40 = 8.1x10⁻¹⁶; m/e39 = 3.0x10⁻¹⁶; m/e38 = 7.7x10⁻¹⁷; m/e37 = 5.6x10⁻¹⁷; m/e36 = 2.7x10⁻¹⁷), mass discrimination (measured ⁴⁰Ar/³⁶Ar_{ATM} = 296 ± 0.5), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-30-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences (⁴⁰Ar/³⁹Ar_a = 0.025; ³⁶Ar/³⁹Ar_a = 0.00025; ³⁹Ar/³⁷Ar_a = 0.0007)

⁵ Assumes trapped argon is atm ospheric. J-factor = 0.006515 (assumes Fish Canyon sandine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

973A Hornblende (20.2 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_{\text{K}}$ ²	$\Sigma^{39}\text{Ar}_{\text{K}}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}_{\text{K}}$ ⁴	Age ⁵	$^{39}\text{Ar}_{\text{K}}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶
		x10 ⁻²		x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$
									x10 ⁻²	x10 ⁻⁴		
1	750	10	15.86	9.274	2.054	42.84	24.02	9.33	21.2	3.369 ± 0.094	40.04 ± 1.10	6.303 ± 0.018
2	850	10	6.230	1.785	0.7484	11.93	10.66	13.5	44.0	2.749 ± 0.066	32.74 ± 0.78	16.10 ± 0.07
3	950	10	5.358	1.821	4.894	9.157	22.80	22.3	57.1	3.075 ± 0.035	36.57 ± 0.42	18.67 ± 0.05
4	990	15	5.792	1.813	7.586	9.324	24.96	32.0	63.5	3.708 ± 0.021	44.02 ± 0.25	17.23 ± 0.04
5	1020	10	6.067	1.660	9.300	8.729	36.32	46.1	70.6	4.321 ± 0.048	51.18 ± 0.56	16.43 ± 0.12
6	1050	10	6.315	1.617	9.597	9.316	49.03	65.2	69.5	4.423 ± 0.060	52.38 ± 0.70	15.77 ± 0.14
7	1100	16	6.400	1.577	8.858	8.936	40.52	80.9	70.6	4.553 ± 0.041	53.89 ± 0.48	15.57 ± 0.07
8	1150	10	9.763	2.234	11.49	21.21	9.253	84.5	45.9	4.532 ± 0.079	53.64 ± 0.92	10.18 ± 0.03
9	1250	10	8.975	2.004	9.526	17.36	39.51	99.8	52.0	4.701 ± 0.030	55.62 ± 0.35	11.09 ± 0.01
10	1450	15	66.82	5.147	8.911	213.6	0.4354	100.0	6.64	4.507 ± 1.021	53.35 ± 11.91	1.487 ± 0.013
												31.57 ± 0.50

¹Corrected for backgrounds (mean values in mol): m/e40 = 1.6×10^{-16} ; m/e39 = 1.0×10^{-16} ; m/e38 = 5.8×10^{-17} ; m/e37 = 8.7×10^{-17} ; m/e36 = 1.1×10^{-16} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-29-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_{\text{K}} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{Ca}} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{Ca}} = 0.00077$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.006660 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

989 MUSCOVITE (0.2M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$	$^{38}\text{Ar}/^{39}\text{Ar}$	$^{37}\text{Ar}/^{39}\text{Ar}$	$^{36}\text{Ar}/^{39}\text{Ar}$	$^{39}\text{Ar}_{\text{K}}$	$\Sigma^{39}\text{Ar}_{\text{K}}$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}^*/^{39}\text{Ar}_{\text{K}}^4$	Age ⁵	$^{39}\text{Ar}_{\text{K}}/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$
											x10 ⁻²	x10 ⁻⁴
1	800	18	9.895	54.66	337.0	212.0	3.552	8.2	35.4	3.631 ± 0.226	42.16 ± 2.60	10.13 ± 0.13
2	1000	17	4.952	1.267	3.405	31.59	21.39	57.6	79.7	3.994 ± 0.036	46.33 ± 0.42	20.30 ± 0.08
3	1350	10	5.058	1.239	5.890	22.16	18.35	100	85.4	4.379 ± 0.042	50.73 ± 0.48	19.87 ± 0.08

¹ Corrected for backgrounds (mean values in mol): m/e40 = 8.4×10^{-16} ; m/e39 = 3.0×10^{-16} ; m/e38 = 7.6×10^{-17} ; m/e37 = 5.6×10^{-17} ; m/e36 = 2.7×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-30-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar} = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.0007$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.006513 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

1021 MUSCOVITE (1.2M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_k^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	30	51.60	347.9	394.6	1635	0.829	0.39	6.30	3.300 ± 0.649	38.37 ± 7.47	1.94 ± 0.01	31.68 ± 0.42
2	600	16	20.70	2.985	679.3	592.1	0.644	0.69	14.9	3.235 ± 0.364	37.62 ± 4.19	4.83 ± 0.04	28.55 ± 0.57
3	700	18	8.519	1.642	155.8	168.9	2.453	1.84	40.0	3.515 ± 0.155	40.84 ± 1.78	11.77 ± 0.07	19.84 ± 0.60
4	800	15	5.387	1.179	13.75	58.97	6.936	5.09	66.1	3.621 ± 0.058	42.06 ± 0.67	18.65 ± 0.06	10.99 ± 0.35
5	850	20	5.192	1.186	4.703	48.96	9.012	9.30	70.7	3.720 ± 0.042	43.21 ± 0.48	19.35 ± 0.05	9.47 ± 0.26
6	900	20	5.364	1.257	1.958	46.20	16.28	16.9	73.5	3.974 ± 0.033	46.12 ± 0.38	18.73 ± 0.03	8.65 ± 0.20
7	950	19	4.698	1.237	0.328	18.20	46.06	38.5	87.8	4.135 ± 0.015	47.96 ± 0.17	21.40 ± 0.04	3.90 ± 0.09
8	1000	21	4.679	1.226	0.726	19.37	32.58	53.7	86.9	4.081 ± 0.011	47.34 ± 0.12	21.49 ± 0.04	4.16 ± 0.04
9	1050	18	4.661	1.221	0.320	15.85	35.91	70.6	89.1	4.167 ± 0.025	48.33 ± 0.29	21.57 ± 0.03	3.42 ± 0.18
10	1150	16	4.545	1.185	2.031	9.745	57.63	97.5	92.9	4.232 ± 0.009	49.07 ± 0.11	22.13 ± 0.03	2.16 ± 0.05
11	1350	14	8.129	1.515	52.42	120.9	5.266	100	55.0	4.535 ± 0.133	52.53 ± 1.52	12.34 ± 0.04	14.90 ± 0.54

¹ Corrected for backgrounds (mean values in mol): m/e40 = 4.4×10^{-16} ; m/e39 = 1.0×10^{-17} ; m/e38 = 2.5×10^{-16} ; m/e37 = 6.5×10^{-17} ; m/e36 = 2.4×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-26-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_a = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_a = 0.0007$)

⁵ Assumes trapped argon is atm ospheric. J-factor = 0.006515 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

1021 B D TITE (4.8M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}^{39}\text{Ar}^1$	$^{38}\text{Ar}^{39}\text{Ar}^1$	$^{37}\text{Ar}^{39}\text{Ar}^1$	$^{36}\text{Ar}^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}^{39}\text{Ar}_k^4$	Age ⁵	$^{39}\text{Ar}_k^{40}\text{Ar}^6$	$^{36}\text{Ar}^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	16	10.83	11.26	22.45	336.1	7.888	1.06	8.01	0.871 ± 0.054	12.10 ± 0.75	9.26 ± 0.01	31.11 ± 0.17
2	600	18	4.526	1.683	13.37	110.5	24.74	4.38	27.2	1.236 ± 0.039	17.14 ± 0.54	22.22 ± 0.03	24.54 ± 0.29
3	700	24	3.227	1.339	9.001	40.65	143.0	23.6	62.0	2.001 ± 0.006	27.67 ± 0.08	31.23 ± 0.03	12.69 ± 0.06
4	750	81	3.057	1.255	5.007	19.89	206.8	51.3	79.9	2.445 ± 0.006	33.74 ± 0.08	32.98 ± 0.03	6.55 ± 0.05
5	800	67	3.155	1.258	5.804	19.42	45.10	57.4	80.8	2.556 ± 0.007	35.26 ± 0.10	31.96 ± 0.03	6.20 ± 0.07
6	900	17	3.159	1.246	8.508	21.79	46.29	63.6	78.4	2.490 ± 0.031	34.36 ± 0.43	31.91 ± 0.10	6.95 ± 0.32
7	1000	18	3.126	1.255	12.68	23.39	112.2	78.6	77.0	2.411 ± 0.010	33.28 ± 0.13	32.25 ± 0.04	7.53 ± 0.10
8	1100	17	2.942	1.244	6.538	18.13	123.1	95.1	80.8	2.381 ± 0.005	32.87 ± 0.06	34.29 ± 0.02	6.21 ± 0.05
9	1350	10	3.258	1.252	82.58	20.33	36.32	100	80.7	2.639 ± 0.014	36.39 ± 0.19	30.93 ± 0.04	6.22 ± 0.14

¹Corrected for backgrounds (mean values in mol): m/e40 = 2.9×10^{-16} ; m/e39 = 4.8×10^{-17} ; m/e38 = 1.6×10^{-17} ; m/e37 = 1.6×10^{-17} ; m/e36 = 1.3×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-17-1999)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}^{39}\text{Ar}_k = 0.0254$; $^{36}\text{Ar}^{39}\text{Ar}_k = 0.000265$; $^{39}\text{Ar}^{37}\text{Ar}_k = 0.00086$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.007722 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

1026 MUSCOVITE (4.3 MG)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_k^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	11	26.98	144.8	150.8	826.4	1.588	0.23	9.25	2.545 ± 1.432	29.68 ± 16.56	3.71 ± 0.12	30.65 ± 1.74
2	600	11	8.930	3.163	156.6	203.2	2.712	0.63	31.5	2.912 ± 0.462	33.92 ± 5.33	11.23 ± 0.22	22.77 ± 1.68
3	700	26	4.980	1.483	30.58	45.25	10.45	2.17	71.6	3.620 ± 0.110	42.07 ± 1.26	20.18 ± 0.12	9.12 ± 0.73
4	800	14	4.468	1.268	10.59	21.01	24.60	5.78	84.9	3.823 ± 0.049	44.39 ± 0.57	22.51 ± 0.07	4.72 ± 0.36
5	850	16	4.469	1.235	7.578	16.62	34.13	10.8	88.0	3.954 ± 0.035	45.90 ± 0.40	22.50 ± 0.06	3.74 ± 0.25
6	900	10	5.000	1.280	4.064	30.78	36.63	16.2	81.0	4.066 ± 0.033	47.18 ± 0.38	20.10 ± 0.04	6.18 ± 0.22
7	950	12	4.616	1.221	1.047	11.12	180.2	42.6	92.2	4.262 ± 0.012	49.43 ± 0.13	21.78 ± 0.02	2.42 ± 0.08
8	1000	10	4.511	1.232	2.024	9.948	97.34	56.9	92.8	4.192 ± 0.012	48.62 ± 0.14	22.29 ± 0.02	2.22 ± 0.09
9	1050	15	4.508	1.224	1.069	6.848	165.22	81.2	94.9	4.280 ± 0.008	49.64 ± 0.09	22.31 ± 0.02	1.53 ± 0.05
10	1150	10	4.571	1.210	7.884	6.899	79.60	92.8	94.8	4.342 ± 0.017	50.34 ± 0.19	22.00 ± 0.04	1.51 ± 0.11
11	1350	10	4.753	1.221	57.71	10.27	48.74	100	92.9	4.429 ± 0.024	51.34 ± 0.28	21.15 ± 0.04	2.14 ± 0.16

¹ Corrected for backgrounds (mean values in mol): m/e40 = 5.3×10^{-16} ; m/e39 = 2.6×10^{-16} ; m/e38 = 7.1×10^{-17} ; m/e37 = 5.2×10^{-17} ; m/e36 = 2.5×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-28-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_k = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_k = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_k = 0.0007$)

⁵ Assumes trapped argon is atm ospheric. J-factor = 0.006517 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

1026 BIDTITE (6.0M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	12	10.83	4.747	23.51	345.9	19.09	1.95	5.35	0.580 ± 0.079	8.05 ± 1.10	9.26 ± 0.01	32.02 ± 0.25
2	600	10	4.687	1.714	17.33	128.3	24.07	4.40	18.5	0.871 ± 0.022	12.07 ± 0.30	21.45 ± 0.02	27.51 ± 0.16
3	680	8	3.588	1.436	17.33	66.49	132.0	17.9	44.5	1.599 ± 0.012	22.09 ± 0.17	28.07 ± 0.02	18.65 ± 0.11
4	740	8	3.412	1.311	10.70	38.57	111.8	29.3	65.8	2.248 ± 0.006	30.97 ± 0.09	29.53 ± 0.00	11.38 ± 0.06
5	780	11	3.434	1.262	9.149	27.20	128.1	42.3	75.8	2.605 ± 0.006	35.85 ± 0.09	29.34 ± 0.02	7.97 ± 0.06
6	780	10	3.446	1.223	10.52	21.27	70.06	49.5	80.9	2.793 ± 0.008	38.41 ± 0.11	29.23 ± 0.02	6.21 ± 0.07
7	900	10	3.475	1.234	12.38	24.45	80.32	57.7	78.4	2.728 ± 0.007	37.52 ± 0.09	28.99 ± 0.05	7.08 ± 0.04
8	1000	16	3.560	1.255	12.89	32.59	171.0	75.1	72.2	2.573 ± 0.005	35.41 ± 0.07	28.29 ± 0.01	9.21 ± 0.05
9	1100	13	3.379	1.244	8.811	27.73	158.3	91.3	74.9	2.534 ± 0.004	34.89 ± 0.05	29.82 ± 0.01	8.26 ± 0.04
10	1350	10	3.675	1.326	49.01	26.62	85.53	100	77.9	2.867 ± 0.015	39.41 ± 0.21	27.40 ± 0.04	7.26 ± 0.13

¹Corrected for backgrounds (mean values in mol): $m/e40 = 3.1 \times 10^{-16}$; $m/e39 = 4.0 \times 10^{-17}$; $m/e38 = 1.4 \times 10^{-17}$; $m/e37 = 1.4 \times 10^{-17}$; $m/e36 = 1.3 \times 10^{-17}$, mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{ATM} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 10-30-2000)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{Ca} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{Ca} = 0.00086$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.007704 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

1049 Hornblende (24.0 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_\text{K}$ ²	$\Sigma^{39}\text{Ar}_\text{K}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}_\text{K}$ ⁴	Age ⁵	$^{39}\text{Ar}_\text{K}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶	
		x10 ⁻²		x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	750	10	15.71	3.965	8.295	43.92	2.264	2.00	21.8	3.469 ± 0.618	41.34 ± 7.28	6.333 ± 0.020	26.41 ± 1.32
2	850	10	11.46	3.595	4.964	32.08	2.186	3.94	20.7	2.407 ± 0.419	28.78 ± 4.97	8.710 ± 0.028	26.75 ± 1.23
3	950	10	5.976	2.449	13.51	12.93	6.965	10.1	55.4	3.365 ± 0.143	40.12 ± 1.69	16.62 ± 0.03	14.91 ± 0.80
4	990	15	6.324	2.459	16.17	13.75	5.710	15.2	57.7	3.717 ± 0.146	44.27 ± 1.72	15.67 ± 0.02	14.13 ± 0.77
5	1020	10	6.561	2.345	20.82	13.71	8.989	23.1	65.8	4.403 ± 0.076	52.32 ± 0.89	15.05 ± 0.03	11.42 ± 0.38
6	1050	10	7.612	2.566	22.91	16.47	11.97	33.7	62.3	4.838 ± 0.079	57.41 ± 0.93	12.94 ± 0.02	12.65 ± 0.34
7	1100	16	6.077	1.884	21.53	11.33	13.41	45.6	75.7	4.692 ± 0.036	55.70 ± 0.42	16.24 ± 0.04	8.052 ± 0.177
8	1150	10	6.666	2.508	23.84	13.59	22.47	65.5	71.0	4.829 ± 0.027	57.30 ± 0.31	14.77 ± 0.02	9.696 ± 0.123
9	1250	10	6.939	2.476	22.47	13.87	38.83	99.8	69.2	4.894 ± 0.040	58.06 ± 0.46	14.21 ± 0.02	10.31 ± 0.18
10	1450	15	120.07	11.53	20.52	390.0	0.2028	100	5.46	6.729 ± 4.583	79.36 ± 52.87	0.820 ± 0.017	31.97 ± 1.25

¹Corrected for backgrounds (mean values in mol): m/e40 = 1.5×10^{-16} ; m/e39 = 9.0×10^{-17} ; m/e38 = 5.2×10^{-17} ; m/e37 = 8.1×10^{-17} ; m/e36 = 9.8×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_\text{ATM} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-31-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_\text{a} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_\text{ca} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_\text{ca} = 0.00077$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.006683 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

1090 MUSCOVITE (0.9M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	x10 ⁻²
												x10 ⁻⁴
1	500	32	24.84	175.6	433.8	749.3	1.316	1.04	10.5	2.708 ± 0.639	31.56 ± 7.38	4.03 ± 0.06
2	550	21	12.37	5.147	650.6	253.6	0.701	1.60	35.1	4.898 ± 0.765	56.68 ± 8.72	8.10 ± 0.36
3	600	16	16.81	4.059	1569	456.4	1.422	2.72	19.4	3.419 ± 0.470	39.75 ± 5.40	5.95 ± 0.10
4	650	13	26.67	2.499	1975	784.8	2.804	4.94	13.3	3.604 ± 0.274	41.88 ± 3.15	3.75 ± 0.03
5	700	13	21.04	2.136	423.1	596.8	3.905	8.03	16.0	3.409 ± 0.225	39.64 ± 2.59	4.76 ± 0.03
6	750	10	11.97	1.530	26.11	286.8	5.262	12.2	28.5	3.474 ± 0.119	40.39 ± 1.36	8.37 ± 0.05
7	800	13	4.751	1.160	19.36	37.67	7.269	17.9	73.7	3.614 ± 0.083	42.00 ± 0.96	21.16 ± 0.22
8	830	14	4.661	1.091	13.26	30.62	6.476	23.1	77.2	3.732 ± 0.085	43.35 ± 0.98	21.57 ± 0.25
9	860	18	4.551	1.111	9.912	24.19	8.425	29.7	81.4	3.812 ± 0.066	44.27 ± 0.76	22.09 ± 0.21
10	900	15	4.354	1.184	7.887	17.57	11.19	38.6	85.6	3.811 ± 0.053	44.26 ± 0.60	23.10 ± 0.16
11	950	14	4.116	1.209	5.140	12.10	21.37	55.5	89.6	3.734 ± 0.023	43.37 ± 0.26	24.44 ± 0.10
12	1000	12	4.152	1.169	7.665	11.35	18.03	69.7	90.0	3.792 ± 0.028	44.05 ± 0.32	24.23 ± 0.11
13	1050	14	4.281	1.199	7.309	12.34	17.90	83.9	89.6	3.891 ± 0.028	45.18 ± 0.32	23.50 ± 0.11
14	1200	10	4.781	1.251	74.02	21.46	20.35	100	85.4	4.128 ± 0.024	47.89 ± 0.28	21.02 ± 0.08
												4.47 ± 0.12

¹ Corrected for backgrounds (mean values in mol): m/e40 = 7.1×10^{-16} ; m/e39 = 1.0×10^{-15} ; m/e38 = 3.2×10^{-17} ; m/e37 = 2.4×10^{-17} ; m/e36 = 2.1×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-14-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_a = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_a = 0.0007$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.006517 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

1376 B D TITE (5.0M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	^{39}Ar ² x10 ⁻²	$\Sigma^{39}\text{Ar}$ (mol)	^{40}Ar ³ (%)	$^{40}\text{Ar}/^{39}\text{Ar}$ ⁴	Age ⁵ $\pm 1\sigma$ (Ma)	$^{39}\text{Ar}/^{40}\text{Ar}$ ⁶ x10 ⁻²	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶ x10 ⁻⁴	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵								
1	500	12	14.45	13.75	61.89	440.2	6.267	0.69	9.82	1426 ± 0.144	19.72 ± 1.98	6.93 ± 0.03	30.50 ± 0.33
2	600	10	5.139	1.731	12.18	102.8	23.47	3.27	40.2	2076 ± 0.028	28.64 ± 0.38	19.55 ± 0.03	20.10 ± 0.18
3	680	13	2.864	1.295	5.526	22.20	154.4	20.3	76.1	2184 ± 0.004	30.11 ± 0.05	35.22 ± 0.03	7.81 ± 0.03
4	740	17	2.434	1.226	2.477	6.608	209.4	43.3	90.9	2213 ± 0.002	30.51 ± 0.03	41.53 ± 0.01	2.74 ± 0.02
5	780	14	2.413	1.229	2.130	5.838	130.2	57.6	91.7	2216 ± 0.003	30.55 ± 0.04	41.88 ± 0.01	2.44 ± 0.04
6	840	24	2.655	1.228	5.433	13.27	66.01	64.9	84.0	2238 ± 0.016	30.85 ± 0.21	38.03 ± 0.05	5.04 ± 0.20
7	900	20	3.225	1.283	10.03	32.13	35.23	68.8	69.5	2251 ± 0.018	31.03 ± 0.25	31.25 ± 0.08	10.03 ± 0.17
8	1000	16	2.717	1.251	3.814	14.95	96.74	79.4	82.7	2250 ± 0.010	31.01 ± 0.13	37.16 ± 0.02	5.55 ± 0.12
9	1100	40	2.565	1.240	2.330	9.584	125.8	93.2	87.8	2257 ± 0.005	31.11 ± 0.07	39.37 ± 0.03	3.77 ± 0.07
10	1350	20	3.168	1.321	30.21	21.10	61.40	100	79.4	2521 ± 0.019	34.72 ± 0.26	31.82 ± 0.02	6.69 ± 0.21

¹ Corrected for backgrounds (mean values in mol): m/e40 = 3.2×10^{-16} ; m/e39 = 4.9×10^{-17} ; m/e38 = 1.5×10^{-17} ; m/e37 = 1.6×10^{-17} ; m/e36 = 1.4×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 09-30-2000)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_{\text{a}} = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.00086$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007707 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

82 MUSCOVITE (2.3 MG)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	28	31.52	245.3	789.9	987.5	1.981	0.55	7.43	2.377 ± 0.991	27.59 ± 11.42	3.17 ± 0.05	31.29 ± 1.05
2	600	16	6.530	6.992	197.5	114.9	2.814	1.34	45.7	3.124 ± 0.379	36.17 ± 4.34	15.37 ± 0.19	17.59 ± 1.94
3	700	13	4.570	1.947	105.5	37.93	7.954	3.57	73.4	3.432 ± 0.138	39.70 ± 1.58	22.00 ± 0.13	8.29 ± 1.01
4	800	12	4.212	1.427	17.77	20.14	20.41	9.28	84.5	3.593 ± 0.055	41.54 ± 0.63	23.88 ± 0.06	4.80 ± 0.44
5	850	12	4.405	1.317	7.519	18.62	32.26	18.3	86.4	3.830 ± 0.035	44.25 ± 0.40	22.83 ± 0.06	4.25 ± 0.26
6	900	10	4.504	1.285	3.796	15.69	49.60	32.2	88.8	4.016 ± 0.022	46.37 ± 0.25	22.33 ± 0.03	3.50 ± 0.16
7	950	12	4.392	1.288	2.386	12.31	64.96	50.4	90.9	4.003 ± 0.017	46.23 ± 0.19	22.90 ± 0.02	2.82 ± 0.13
8	1000	11	4.474	1.292	1.739	12.69	50.38	64.5	90.7	4.074 ± 0.022	47.03 ± 0.26	22.48 ± 0.03	2.85 ± 0.16
9	1050	11	4.477	1.257	1.386	9.648	44.07	76.8	92.7	4.167 ± 0.024	48.09 ± 0.28	22.46 ± 0.03	2.17 ± 0.18
10	1150	10	4.507	1.244	1.963	6.540	79.09	98.9	94.9	4.289 ± 0.016	49.48 ± 0.19	22.31 ± 0.04	1.46 ± 0.10
11	1350	14	5.708	1.929	98.93	54.53	3.845	100	68.8	4.079 ± 0.294	47.09 ± 3.35	17.60 ± 0.18	9.55 ± 1.72

¹ Corrected for backgrounds (mean values in mol): m/e40 = 5.4×10^{-16} ; m/e39 = 8.0×10^{-17} ; m/e38 = 2.4×10^{-17} ; m/e37 = 2.0×10^{-17} ; m/e36 = 1.8×10^{-17}), mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-18-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_a = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_a = 0.0007$)

⁵ Assumes trapped argon is atm atmospheric J-factor = 0.006483 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

82 KFELDSPAR (19.3 MG)

T (°C)	Time (min.)	⁴⁰ Ar/ ³⁹ Ar ¹	³⁸ Ar/ ³⁹ Ar ¹	³⁷ Ar/ ³⁹ Ar ¹	³⁶ Ar/ ³⁹ Ar ¹	³⁹ Ar _K ²	$\Sigma^{39}\text{Ar}_K$	⁴⁰ Ar ³	⁴⁰ Ar*/ ³⁹ Ar _K ⁴	Age ⁵	³⁹ Ar _K / ⁴⁰ Ar ⁶	³⁶ Ar/ ⁴⁰ Ar ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	x10 ⁻²	x10 ⁻⁴
1	450	19	74.28	63.62	55.86	1669	4.552	0.13	33.5	24.94 ± 0.192	299.11 ± 2.12	1.35 ± 0.00	22.47 ± 0.09
2	450	42	13.80	3.197	16.69	354.9	1.963	0.18	23.6	3.289 ± 0.156	42.39 ± 1.99	7.26 ± 0.02	25.76 ± 0.38
3	500	15	10.12	2.491	17.82	185.1	2.982	0.26	45.3	4.626 ± 0.106	59.35 ± 1.34	9.91 ± 0.02	18.33 ± 0.35
4	500	35	4.917	1.702	9.435	70.57	5.606	0.42	56.6	2.807 ± 0.046	36.25 ± 0.59	20.44 ± 0.03	14.42 ± 0.31
5	550	15	7.152	1.937	8.875	110.1	10.44	0.71	54.0	3.874 ± 0.025	49.83 ± 0.31	14.03 ± 0.02	15.45 ± 0.11
6	550	22	3.101	1.269	9.804	21.01	11.74	1.04	78.7	2.456 ± 0.030	31.76 ± 0.39	32.51 ± 0.06	6.82 ± 0.33
7	600	17	4.359	1.422	23.83	48.45	31.32	1.91	66.5	2.905 ± 0.014	37.49 ± 0.18	23.07 ± 0.03	11.16 ± 0.10
8	600	22	2.644	1.222	61.63	9.379	27.23	2.67	88.4	2.347 ± 0.007	30.35 ± 0.09	38.18 ± 0.05	3.52 ± 0.08
9	650	21	3.165	1.280	72.14	20.13	69.12	4.59	80.5	2.551 ± 0.004	32.97 ± 0.06	31.84 ± 0.02	6.35 ± 0.04
10	650	21	2.656	1.214	52.15	7.240	42.50	5.78	90.9	2.421 ± 0.008	31.31 ± 0.10	38.01 ± 0.05	2.70 ± 0.10
11	700	13	3.000	1.247	42.96	14.98	74.19	7.84	84.4	2.536 ± 0.004	32.77 ± 0.05	33.61 ± 0.02	5.00 ± 0.04
12	700	56	2.581	1.208	20.41	4.022	135.4	11.6	94.4	2.439 ± 0.003	31.53 ± 0.04	39.12 ± 0.04	1.55 ± 0.02
13	750	15	2.666	1.231	8.809	6.768	62.19	13.3	91.4	2.441 ± 0.004	31.57 ± 0.05	37.87 ± 0.01	2.55 ± 0.05
14	750	20	2.490	1.211	6.963	3.031	50.97	14.8	95.2	2.376 ± 0.004	30.72 ± 0.06	40.58 ± 0.03	1.22 ± 0.05
15	800	18	2.531	1.213	4.873	5.331	84.54	17.1	92.7	2.349 ± 0.003	30.38 ± 0.04	39.90 ± 0.02	2.12 ± 0.03
16	800	30	2.446	1.194	3.906	3.371	64.37	18.9	94.7	2.321 ± 0.004	30.03 ± 0.05	41.31 ± 0.02	1.39 ± 0.05
17	825	10	2.607	1.201	4.392	8.835	27.75	19.7	88.7	2.321 ± 0.010	30.02 ± 0.13	38.73 ± 0.06	3.42 ± 0.12
18	850	19	2.445	1.197	4.750	4.607	55.29	21.2	93.2	2.284 ± 0.005	29.55 ± 0.07	41.32 ± 0.04	1.90 ± 0.07
19	875	20	2.442	1.202	4.655	4.459	53.28	22.7	93.4	2.286 ± 0.006	29.57 ± 0.08	41.37 ± 0.02	1.84 ± 0.08
20	900	15	2.505	1.202	5.015	6.270	46.31	24.0	91.4	2.295 ± 0.006	29.69 ± 0.08	40.32 ± 0.06	2.52 ± 0.07
21	600	897	8.924	1.600	-0.566	207.6	4.111	24.1	30.8	2.765 ± 0.116	35.71 ± 1.48	11.24 ± 0.03	23.33 ± 0.44
22	925	24	2.467	1.205	3.212	4.293	79.84	26.3	93.7	2.316 ± 0.003	29.96 ± 0.04	40.94 ± 0.03	1.75 ± 0.04
23	950	41	2.458	1.205	2.830	3.756	96.19	29.0	94.4	2.322 ± 0.002	30.04 ± 0.03	41.10 ± 0.03	1.54 ± 0.02
24	975	21	2.470	1.230	2.697	4.415	48.41	30.4	93.5	2.315 ± 0.005	29.94 ± 0.06	40.90 ± 0.07	1.80 ± 0.04
25	1000	13	2.510	1.217	3.247	5.631	35.44	31.3	92.1	2.319 ± 0.005	30.00 ± 0.06	40.24 ± 0.03	2.26 ± 0.06
26	1025	20	2.532	1.225	3.175	6.290	62.58	33.1	91.5	2.321 ± 0.004	30.02 ± 0.05	39.89 ± 0.03	2.51 ± 0.05
27	1050	34	2.541	1.226	2.614	6.056	105.4	36.0	91.9	2.338 ± 0.003	30.24 ± 0.03	39.74 ± 0.03	2.40 ± 0.02
28	1075	13	2.658	1.227	3.110	9.096	47.20	37.3	88.7	2.364 ± 0.009	30.58 ± 0.11	37.98 ± 0.02	3.45 ± 0.11
29	1100	10	2.647	1.258	3.573	8.408	46.85	38.6	89.5	2.374 ± 0.006	30.71 ± 0.07	38.13 ± 0.04	3.20 ± 0.07
30	1100	15	2.606	1.254	2.695	6.616	49.21	40.0	91.3	2.385 ± 0.004	30.85 ± 0.06	38.75 ± 0.03	2.56 ± 0.05
31	1100	30	2.654	1.261	3.089	8.095	76.10	42.1	89.9	2.390 ± 0.003	30.90 ± 0.04	38.04 ± 0.02	3.08 ± 0.03
32	1100	61	2.719	1.272	3.472	9.859	104.8	45.0	88.3	2.403 ± 0.005	31.07 ± 0.07	37.12 ± 0.05	3.66 ± 0.05

82 KFELDSPAR (19.3 MG) CONTINUED

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	x10 ⁻²
												x10 ⁻⁴
33	1100	130	2.767	1.273	4.085	10.67	120.6	48.4	87.6	2.427 ± 0.004	31.38 ± 0.05	36.47 ± 0.03
34	1100	159	2.811	1.284	4.000	11.66	111.4	51.5	86.8	2.441 ± 0.004	31.57 ± 0.06	35.90 ± 0.03
35	1100	865	2.925	1.292	3.438	13.86	249.1	58.4	85.1	2.491 ± 0.005	32.20 ± 0.06	34.48 ± 0.03
36	1200	18	3.521	1.347	9.635	25.44	28.63	59.2	77.8	2.746 ± 0.010	35.46 ± 0.12	28.60 ± 0.04
37	1225	22	3.376	1.351	9.758	18.61	46.96	60.5	82.8	2.802 ± 0.009	36.18 ± 0.11	29.84 ± 0.01
38	1250	10	3.285	1.371	6.705	17.10	43.60	61.8	83.7	2.755 ± 0.006	35.59 ± 0.08	30.67 ± 0.02
39	1300	11	3.070	1.321	1.510	13.85	275.7	69.4	85.8	2.636 ± 0.005	34.06 ± 0.06	32.84 ± 0.02
40	1350	18	2.974	1.298	0.826	14.23	1050	98.7	85.0	2.529 ± 0.002	32.69 ± 0.02	33.91 ± 0.01
41	1650	17	3.154	1.308	3.710	19.35	27.47	99.4	80.8	2.558 ± 0.007	33.06 ± 0.09	31.96 ± 0.02
42	1650	17	5.939	1.672	12.89	102.5	9.550	99.7	48.3	2.885 ± 0.063	37.25 ± 0.80	16.91 ± 0.02
43	1650	31	11.98	2.093	14.93	300.4	10.41	100.0	25.6	3.075 ± 0.088	39.67 ± 1.13	8.37 ± 0.02
												25.13 ± 0.24

¹ Corrected for backgrounds (mean values in mol): m/e40 = 1.7×10^{-16} ; m/e39 = 3.9×10^{-17} ; m/e38 = 1.1×10^{-17} ; m/e37 = 1.2×10^{-17} ; m/e36 = 1.2×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-09-2000; Analyzed: 04-17-2000)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_k = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.0007$)

⁵ Assumes trapped argon is atm ospheric. J-factor = 0.00723 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

87 BIOTITE (6.0 MG)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_K^2$	$\Sigma^{39}\text{Ar}_K$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_K^4$	Age ⁵	$^{39}\text{Ar}_K/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$
											x10 ⁻²	x10 ⁻⁴
1	500	7	17.37	18.28	97.07	543.1	4.261	0.41	7.47	1.306 ± 0.140	18.08 ± 1.93	5.76 ± 0.01
2	600	10	9.291	4.420	64.01	247.9	10.42	1.41	20.8	1.945 ± 0.068	26.86 ± 0.93	10.79 ± 0.02
3	680	10	6.978	4.698	51.45	134.2	49.88	6.19	42.8	2.991 ± 0.041	41.14 ± 0.56	14.38 ± 0.01
4	740	13	4.007	4.645	8.448	25.46	122.7	18.0	80.5	3.230 ± 0.007	44.39 ± 0.09	25.11 ± 0.01
5	780	10	3.620	4.622	3.596	11.24	119.7	29.4	90.0	3.262 ± 0.006	44.83 ± 0.09	27.82 ± 0.03
6	840	11	3.532	4.671	2.941	7.428	126.9	41.6	93.0	3.287 ± 0.006	45.17 ± 0.09	28.52 ± 0.03
7	900	12	3.576	4.683	6.336	8.698	71.50	48.4	91.9	3.295 ± 0.006	45.26 ± 0.08	28.16 ± 0.03
8	1000	10	3.577	4.612	12.40	10.17	80.96	56.2	90.8	3.252 ± 0.006	44.69 ± 0.08	28.15 ± 0.03
9	1100	11	3.470	4.584	3.344	7.180	236.51	78.9	93.0	3.232 ± 0.008	44.42 ± 0.11	29.03 ± 0.03
10	1350	10	3.640	4.631	3.267	9.868	220.3	100	91.2	3.323 ± 0.004	45.65 ± 0.05	27.67 ± 0.02

¹Corrected for backgrounds (mean values in mol): m/e40 = 3.3×10^{-16} ; m/e39 = 5.5×10^{-17} ; m/e38 = 1.8×10^{-17} ; m/e37 = 1.7×10^{-17} ; m/e36 = 1.6×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{ATM} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 09-29-2000)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_K = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{Ca} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{Ca} = 0.00086$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.007712 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

92A BOTTITE (5.1M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	8	16.24	23.51	53.69	500.2	3.831	0.42	8.82	1442 ± 0.130	19.98 ± 1.79	6.17 ± 0.02	30.83 ± 0.27
2	600	13	7.885	3.097	28.98	184.6	10.27	1.55	30.4	2407 ± 0.082	33.24 ± 1.12	12.72 ± 0.01	23.48 ± 0.35
3	680	5	5.446	3.176	74.16	87.46	23.14	4.09	52.0	2842 ± 0.027	39.17 ± 0.37	18.45 ± 0.02	16.10 ± 0.17
4	740	11	3.823	3.240	7.659	23.09	91.44	14.1	81.4	3116 ± 0.013	42.90 ± 0.17	26.33 ± 0.01	6.08 ± 0.11
5	780	19	3.535	3.309	2.012	9.576	132.7	28.7	91.2	3227 ± 0.007	44.42 ± 0.09	28.49 ± 0.03	2.73 ± 0.06
6	840	14	3.529	3.314	1.850	7.794	84.67	38.0	92.6	3273 ± 0.009	45.04 ± 0.12	28.55 ± 0.02	2.22 ± 0.09
7	900	11	3.604	3.311	6.263	11.17	39.29	42.4	89.9	3249 ± 0.010	44.72 ± 0.14	27.94 ± 0.03	3.12 ± 0.09
8	1000	14	3.514	3.250	13.24	10.33	75.31	50.6	90.5	3185 ± 0.009	43.84 ± 0.12	28.66 ± 0.02	2.95 ± 0.08
9	1100	15	3.380	3.233	3.877	6.341	182.1	70.7	93.6	3168 ± 0.003	43.61 ± 0.05	29.81 ± 0.02	1.89 ± 0.02
10	1350	15	3.549	3.336	4.871	6.960	267.0	100	93.4	3318 ± 0.006	45.66 ± 0.09	28.38 ± 0.03	1.97 ± 0.05

¹Corrected for backgrounds (mean values in mol): m/e40 = 2.8×10^{-16} ; m/e39 = 4.6×10^{-17} ; m/e38 = 1.5×10^{-17} ; m/e37 = 1.5×10^{-17} ; m/e36 = 1.3×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{ATM} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 09-30-2000)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{Ca} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{Ca} = 0.00086$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.007724 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

120 Muscovite (4.4 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$
											x10 ⁻²	x10 ⁻⁴
1	500	35	18.02	82.91	162.4	51.34	4.249	0.601	15.5	2.834 ± 0.254	32.88 ± 2.92	5.557 ± 0.055
2	600	11	6.210	13.10	61.67	9.516	14.78	2.69	53.7	3.378 ± 0.043	39.12 ± 0.50	16.17 ± 0.07
3	700	19	4.227	1.370	44.70	2.499	25.30	6.27	81.2	3.467 ± 0.024	40.14 ± 0.28	23.80 ± 0.08
4	800	12	4.260	1.268	7.988	1.556	38.78	11.8	88.0	3.776 ± 0.017	43.67 ± 0.19	23.61 ± 0.07
5	850	18	4.630	1.269	3.177	1.969	62.35	20.6	86.6	4.024 ± 0.010	46.51 ± 0.11	21.71 ± 0.03
6	900	10	4.511	1.256	2.461	1.281	89.08	33.2	90.8	4.107 ± 0.008	47.46 ± 0.09	22.29 ± 0.03
7	950	15	4.447	1.248	2.091	0.905	115.8	49.6	93.2	4.154 ± 0.008	48.00 ± 0.10	22.62 ± 0.04
8	1000	10	4.560	1.235	6.051	1.085	75.08	60.2	92.1	4.214 ± 0.009	48.68 ± 0.11	22.05 ± 0.03
9	1050	10	4.581	1.252	2.074	0.901	98.28	74.1	93.4	4.290 ± 0.006	49.54 ± 0.07	21.95 ± 0.02
10	1150	10	4.514	1.258	2.317	0.456	179.1	99.4	96.3	4.354 ± 0.004	50.27 ± 0.04	22.28 ± 0.02
11	1300	10	7.100	2.027	366.6	6.167	4.135	100	71.6	5.281 ± 0.121	60.80 ± 1.36	14.13 ± 0.17

¹ Corrected for backgrounds (mean values in mol): m/e40 = 7.1×10^{-16} ; m/e39 = 1.0×10^{-17} ; m/e38 = 3.2×10^{-17} ; m/e37 = 2.4×10^{-17} ; m/e36 = 2.1×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296.5 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-17-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_a = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_a = 0.0007$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.00649 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

158 Homblende (23.4 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$	$^{38}\text{Ar}/^{39}\text{Ar}$	$^{37}\text{Ar}/^{39}\text{Ar}$	$^{36}\text{Ar}/^{39}\text{Ar}$	$^{39}\text{Ar}_\text{K}$	$\Sigma^{39}\text{Ar}_\text{K}$	$^{40}\text{Ar}^*$	$^{40}\text{Ar}^*/^{39}\text{Ar}_\text{K}$	Age ⁵	$^{39}\text{Ar}_\text{K}/^{40}\text{Ar}$	$^{36}\text{Ar}/^{40}\text{Ar}$
		x10 ⁻²	x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	$\pm 1\sigma$
								x10 ⁻²	x10 ⁻⁴			
1	750	10	23.24	6.564	0.9499	66.02	13.03	2.58	16.3	3.801 ± 0.075	45.09 ± 0.87	4.303 ± 0.011
2	850	12	18.78	6.197	1.137	56.32	8.917	4.34	11.8	2.213 ± 0.071	26.39 ± 0.84	5.327 ± 0.006
3	950	17	7.221	18.27	3.097	14.10	19.37	8.17	45.7	3.316 ± 0.081	39.40 ± 0.95	13.86 ± 0.10
4	990	10	6.013	35.15	4.351	6.657	14.91	11.1	73.1	4.424 ± 0.033	52.38 ± 0.39	16.64 ± 0.05
5	1020	10	5.728	38.49	4.534	3.726	80.02	27.0	87.4	5.024 ± 0.022	59.37 ± 0.26	17.47 ± 0.05
6	1050	16	6.154	38.03	4.509	4.694	79.67	42.7	83.5	5.162 ± 0.032	60.97 ± 0.37	16.25 ± 0.05
7	1100	10	6.011	37.39	4.435	4.337	144.5	71.3	84.8	5.118 ± 0.010	60.45 ± 0.11	16.64 ± 0.01
8	1150	10	6.278	37.43	5.012	5.589	30.44	77.3	80.3	5.068 ± 0.019	59.88 ± 0.22	15.92 ± 0.02
9	1250	15	6.385	38.19	4.704	5.409	113.9	99.9	81.1	5.200 ± 0.010	61.42 ± 0.12	15.66 ± 0.01
10	1450	10	34.15	39.19	4.763	95.26	0.65	100	18.5	6.421 ± 0.968	75.53 ± 11.15	2.920 ± 0.030
												27.50 ± 0.93

¹ Corrected for backgrounds (mean values in mol): m/e40 = 1.7×10^{-16} ; m/e39 = 9.9×10^{-17} ; m/e38 = 5.6×10^{-17} ; m/e37 = 8.4×10^{-17} ; m/e36 = 1.0×10^{-16} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_\text{ATM} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-28-2001)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_\text{a} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_\text{ca} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_\text{ca} = 0.00077$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.006659 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

177 MUSCOVITE (0.2M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$	$^{38}\text{Ar}/^{39}\text{Ar}$	$^{37}\text{Ar}/^{39}\text{Ar}$	$^{36}\text{Ar}/^{39}\text{Ar}$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}$	$^{36}\text{Ar}/^{40}\text{Ar}$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	800	25	9.569	91.30	352.2	204.0	4.378	9.62	35.9	3.541 ± 0.224	41.04 ± 2.56	10.48 ± 0.11	21.29 ± 0.74
2	1000	22	4.849	1.307	5.284	24.34	23.13	60.5	83.7	4.105 ± 0.037	47.49 ± 0.42	20.73 ± 0.09	5.04 ± 0.21
3	1350	14	5.418	1.351	5.553	31.49	17.99	100	81.3	4.463 ± 0.049	51.57 ± 0.56	18.54 ± 0.08	5.84 ± 0.27

¹ Corrected for backgrounds (mean values in mol): m/e40 = 8.4×10^{-16} ; m/e39 = 3.0×10^{-16} ; m/e38 = 7.6×10^{-17} ; m/e37 = 5.6×10^{-17} ; m/e36 = 2.7×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-30-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar} = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 7.0007$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.006497 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

230 MUSCOVITE (6.3 MG)

T (°C)	Time (min.)	⁴⁰ Ar/ ³⁹ Ar ¹	³⁸ Ar/ ³⁹ Ar ¹	³⁷ Ar/ ³⁹ Ar ¹	³⁶ Ar/ ³⁹ Ar ¹	³⁹ Ar _K ²	$\Sigma^{39}\text{Ar}_K$	⁴⁰ Ar ³	⁴⁰ Ar*/ ³⁹ Ar _K ⁴	Age ⁵	³⁹ Ar _K / ⁴⁰ Ar ⁶	³⁶ Ar/ ⁴⁰ Ar ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	41	22.42	62.90	112.6	676.2	3.727	0.47	10.7	2.416 ± 0.180	31.13 ± 2.30	4.47 ± 0.02	30.19 ± 0.26
2	600	18	7.221	1.913	165.9	147.4	5.051	1.10	39.2	2.853 ± 0.078	36.70 ± 0.99	13.90 ± 0.04	20.43 ± 0.36
3	650	58	4.237	1.442	279.4	44.26	15.60	3.05	68.7	2.925 ± 0.013	37.62 ± 0.17	23.74 ± 0.04	10.34 ± 0.09
4	690	14	4.236	1.363	49.92	41.00	5.404	3.73	70.1	3.003 ± 0.038	38.61 ± 0.48	23.75 ± 0.05	9.71 ± 0.30
5	730	21	3.825	1.312	14.66	25.16	14.23	5.52	79.5	3.058 ± 0.028	39.30 ± 0.36	26.31 ± 0.05	6.61 ± 0.24
6	770	18	3.805	1.283	6.986	21.51	17.24	7.67	82.3	3.145 ± 0.018	40.41 ± 0.22	26.46 ± 0.02	5.69 ± 0.15
7	800	11	4.020	1.334	5.938	22.98	11.60	9.13	82.0	3.317 ± 0.026	42.59 ± 0.33	25.03 ± 0.07	5.75 ± 0.20
8	830	25	4.363	1.281	4.785	27.50	26.29	12.4	80.6	3.526 ± 0.007	45.25 ± 0.09	23.05 ± 0.02	6.33 ± 0.05
9	860	9	4.890	1.275	3.530	37.49	12.18	14.0	76.5	3.758 ± 0.016	48.18 ± 0.20	20.55 ± 0.03	7.70 ± 0.10
10	900	28	4.506	1.253	2.613	19.40	111.0	27.9	86.7	3.908 ± 0.008	50.09 ± 0.10	22.31 ± 0.03	4.33 ± 0.05
11	950	10	4.254	1.276	1.690	10.77	84.79	38.5	91.9	3.910 ± 0.008	50.11 ± 0.10	23.65 ± 0.04	2.55 ± 0.03
12	1000	17	4.239	1.246	2.191	10.27	148.6	57.1	92.2	3.911 ± 0.008	50.12 ± 0.10	23.73 ± 0.01	2.44 ± 0.06
13	1150	11	4.253	1.236	2.093	7.005	333.0	98.8	94.5	4.021 ± 0.003	51.51 ± 0.04	23.65 ± 0.01	1.66 ± 0.02
14	1350	23	4.897	1.481	407.9	28.79	9.226	100	82.2	4.053 ± 0.019	51.91 ± 0.24	20.52 ± 0.03	5.70 ± 0.12

¹ Corrected for backgrounds (mean values in mol): m/e40 = 1.8×10^{-16} ; m/e39 = 3.8×10^{-17} ; m/e38 = 1.3×10^{-17} ; m/e37 = 1.2×10^{-17} ; m/e36 = 1.1×10^{-17} , mass discrimination (measured ⁴⁰Ar/³⁶Ar_{ATM} = 296 ± 0.5), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-09-2000; Analyzed: 05-01-2000)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences (⁴⁰Ar/³⁹Ar_a = 0.025; ³⁶Ar/³⁹Ar_a = 0.00025; ³⁹Ar/³⁷Ar_a = 0.0007)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007203 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

230 KFELDSPAR (29.9 MG)

T (°C)	Time (min.)	⁴⁰ Ar/ ³⁹ Ar ¹	³⁸ Ar/ ³⁹ Ar ¹	³⁷ Ar/ ³⁹ Ar ¹	³⁶ Ar/ ³⁹ Ar ¹	³⁹ Ar _K ²	$\Sigma^{39}\text{Ar}_K$	⁴⁰ Ar ³	⁴⁰ Ar*/ ³⁹ Ar _K ⁴	Age ⁵	³⁹ Ar _K / ⁴⁰ Ar ⁶	³⁶ Ar/ ⁴⁰ Ar ⁶
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	± 1σ	± 1σ (Ma)	± 1σ	± 1σ
										x10 ⁻²	x10 ⁻⁴	
1	450	26	144.1	47.24	204.4	4318	24.05	0.47	11.5	16.52 ± 1.061	203.12 ± 12.34	0.69 ± 0.00
2	450	68	27.65	3.196	62.94	855.0	3.670	0.55	8.50	2.359 ± 0.349	30.44 ± 4.47	3.62 ± 0.00
3	500	46	12.03	2.367	24.37	306.1	17.30	0.89	24.6	2.961 ± 0.049	38.13 ± 0.63	8.33 ± 0.01
4	500	132	5.686	1.470	22.97	125.8	30.78	1.49	34.1	1.944 ± 0.028	25.12 ± 0.36	17.67 ± 0.02
5	550	32	6.477	1.775	35.07	136.1	32.55	2.13	37.5	2.433 ± 0.029	31.38 ± 0.37	15.50 ± 0.03
6	550	30	3.451	1.308	77.00	50.30	22.47	2.58	56.1	1.945 ± 0.012	25.14 ± 0.15	29.19 ± 0.04
7	600	23	4.709	1.554	124.9	80.36	67.82	3.91	49.2	2.319 ± 0.012	29.93 ± 0.15	21.35 ± 0.01
8	600	39	3.077	1.277	187.4	36.70	66.89	5.23	64.3	1.982 ± 0.007	25.61 ± 0.09	32.76 ± 0.03
9	650	17	3.738	1.405	240.4	52.83	84.87	6.90	58.0	2.170 ± 0.017	28.01 ± 0.22	26.93 ± 0.03
10	650	23	3.077	1.271	300.9	36.01	60.13	8.08	65.2	2.011 ± 0.019	25.98 ± 0.25	32.75 ± 0.07
11	700	15	3.409	1.341	283.6	45.36	91.15	9.88	60.5	2.065 ± 0.009	26.67 ± 0.11	29.55 ± 0.02
12	700	22	2.842	1.255	155.3	27.37	68.36	11.2	70.9	2.019 ± 0.004	26.08 ± 0.05	35.50 ± 0.03
13	750	22	3.027	1.280	40.13	32.86	82.92	12.9	67.1	2.034 ± 0.010	26.27 ± 0.13	33.31 ± 0.02
14	750	24	2.591	1.222	7.531	19.13	50.21	13.8	77.0	2.001 ± 0.009	25.85 ± 0.12	38.98 ± 0.03
15	800	28	2.629	1.244	7.731	18.97	100.8	15.8	77.6	2.044 ± 0.005	26.40 ± 0.07	38.40 ± 0.05
16	800	27	2.404	1.207	6.715	12.13	51.05	16.8	83.8	2.021 ± 0.006	26.10 ± 0.08	42.04 ± 0.06
17	825	19	2.411	1.208	6.549	12.06	40.93	17.6	83.9	2.030 ± 0.007	26.23 ± 0.09	41.91 ± 0.01
18	850	23	2.415	1.232	7.106	11.88	56.56	18.8	84.2	2.040 ± 0.005	26.35 ± 0.06	41.83 ± 0.02
19	875	19	2.362	1.210	7.355	9.869	54.34	19.8	86.4	2.046 ± 0.007	26.43 ± 0.09	42.78 ± 0.04
20	900	12	2.542	1.212	7.462	16.33	41.45	20.6	79.8	2.035 ± 0.012	26.28 ± 0.15	39.73 ± 0.07
21	925	15	2.746	1.236	7.801	23.24	64.77	21.9	74.0	2.035 ± 0.006	26.29 ± 0.08	36.74 ± 0.03
22	950	19	2.600	1.240	6.476	16.88	86.75	23.6	79.7	2.077 ± 0.005	26.82 ± 0.07	38.84 ± 0.02
23	975	12	2.476	1.221	7.058	12.68	54.33	24.7	83.7	2.077 ± 0.008	26.83 ± 0.10	40.79 ± 0.02
24	1000	28	2.331	1.221	7.698	7.831	128.5	27.2	88.9	2.075 ± 0.004	26.80 ± 0.05	43.37 ± 0.03
25	1025	14	2.333	1.238	7.721	7.585	72.02	28.6	89.1	2.084 ± 0.009	26.92 ± 0.11	43.33 ± 0.03
26	1050	30	2.367	1.247	6.903	8.230	139.4	31.4	88.6	2.099 ± 0.003	27.11 ± 0.04	42.70 ± 0.04
27	1075	21	2.442	1.239	5.300	10.16	100.4	33.4	86.5	2.118 ± 0.004	27.34 ± 0.06	41.37 ± 0.02
28	1100	35	2.519	1.272	5.523	12.09	173.8	36.8	84.8	2.137 ± 0.004	27.60 ± 0.05	40.09 ± 0.04
29	1100	80	2.580	1.295	5.405	13.56	206.8	40.9	83.5	2.155 ± 0.004	27.82 ± 0.06	39.14 ± 0.04
30	1100	122	2.592	1.301	6.068	13.52	187.1	44.5	83.6	2.168 ± 0.004	27.99 ± 0.04	38.95 ± 0.03
31	1100	185	2.601	1.310	6.402	13.20	176.5	48.0	84.0	2.186 ± 0.006	28.22 ± 0.08	38.82 ± 0.07
32	1100	711	2.648	1.314	6.524	13.73	315.9	54.2	83.7	2.218 ± 0.003	28.63 ± 0.04	38.12 ± 0.02

230 K feldspar (29.9 mg) continued

T (°C)	Time (m.in.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_K^2$	$\Sigma^{39}\text{Ar}_K$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K^4$	Age ⁵	$^{39}\text{Ar}_K/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(m o.l.)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	x10 ⁻²
												x10 ⁻⁴
33	1200	10	3.360	1.520	42.81	37.31	20.82	54.6	66.2	2.236 ± 0.016	28.86 ± 0.21	29.98 ± 0.11
34	1225	17	3.323	1.481	28.04	35.34	76.04	56.1	67.8	2.256 ± 0.011	29.12 ± 0.14	30.32 ± 0.07
35	1250	15	2.928	1.403	10.68	22.61	123.7	58.6	76.3	2.236 ± 0.004	28.86 ± 0.06	34.45 ± 0.03
36	1300	9	2.698	1.343	2.181	14.27	446.7	67.4	83.4	2.251 ± 0.005	29.06 ± 0.06	37.42 ± 0.03
37	1350	14	2.667	1.320	2.307	13.23	1230	91.6	84.3	2.251 ± 0.005	29.05 ± 0.06	37.85 ± 0.02
38	1520	11	2.810	1.343	13.31	16.44	242.8	96.4	81.8	2.300 ± 0.004	29.68 ± 0.05	35.91 ± 0.03
39	1520	15	2.875	1.349	31.75	18.57	126.2	98.9	80.0	2.303 ± 0.008	29.72 ± 0.10	35.09 ± 0.03
40	1650	14	5.692	1.542	4.541	112.4	58.02	100	41.1	2.345 ± 0.029	30.25 ± 0.37	17.65 ± 0.04
												19.84 ± 0.16

¹ Corrected for backgrounds (mean values in (m o.l.): m/e40 = 2.4×10^{-16} ; m/e39 = 5.0×10^{-17} ; m/e38 = 1.7×10^{-17} ; m/e37 = 1.5×10^{-17} ; m/e36 = 1.5×10^{-17}), mass discrimination measured $^{40}\text{Ar}/^{36}\text{Ar}_{ATM} = 296 \pm 0.5$, abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-09-2000; Analyzed: 04-25-2000)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_a = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_a = 0.0007$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007212 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

814 Homblende (22.2 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_\text{K}$ ²	$\Sigma^{39}\text{Ar}_\text{K}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}_\text{K}$ ⁴	Age ⁵	$^{39}\text{Ar}_\text{K}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶
		x10 ⁻²		x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$
									x10 ⁻²	x10 ⁻⁴		
1	750	11	31.57	13.32	1.307	87.26	14.54	2.42	18.6	5.885 ± 0.088	69.22 ± 1.01	3.166 ± 0.004
2	850	10	9.563	4.625	0.9377	21.35	6.959	3.57	34.5	3.316 ± 0.059	39.33 ± 0.69	10.47 ± 0.02
3	950	10	6.047	11.94	2.967	8.209	17.67	6.51	63.7	3.871 ± 0.030	45.83 ± 0.35	16.56 ± 0.02
4	990	10	6.455	20.74	3.905	6.561	18.16	9.52	74.8	4.855 ± 0.034	57.29 ± 0.40	15.50 ± 0.03
5	1020	12	5.904	23.74	3.757	3.243	82.29	23.2	89.0	5.272 ± 0.008	62.12 ± 0.09	16.95 ± 0.01
6	1050	10	5.936	23.71	3.708	2.854	106.3	40.8	90.9	5.415 ± 0.012	63.78 ± 0.14	16.86 ± 0.02
7	1100	14	6.095	23.59	3.656	3.120	205.7	75.0	89.8	5.490 ± 0.010	64.66 ± 0.12	16.42 ± 0.02
8	1150	16	6.850	23.43	4.081	5.889	29.97	80.0	79.4	5.467 ± 0.027	64.38 ± 0.31	14.60 ± 0.02
9	1250	14	6.445	23.96	3.846	4.088	119.9	99.9	86.2	5.572 ± 0.089	65.61 ± 1.03	15.52 ± 0.21
10	1450	10	56.32	24.36	3.438	179.7	0.5576	100	6.16	3.512 ± 1.308	41.63 ± 15.32	1.772 ± 0.014
												31.74 ± 0.78

¹Corrected for backgrounds (mean values in mol): m/e40 = 1.9×10^{-16} ; m/e39 = 1.0×10^{-16} ; m/e38 = 5.9×10^{-17} ; m/e37 = 8.6×10^{-17} ; m/e36 = 1.1×10^{-16} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_\text{ATM} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-29-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_\text{a} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_\text{ca} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_\text{ca} = 0.00077$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.006646 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

887 Homblende (22.8 mg)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}$	$^{38}\text{Ar}/^{39}\text{Ar}$	$^{37}\text{Ar}/^{39}\text{Ar}$	$^{36}\text{Ar}/^{39}\text{Ar}$	$^{39}\text{Ar}_{\text{K}}$	$\Sigma^{39}\text{Ar}_{\text{K}}$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_\text{K}^4$	Age ⁵	$^{39}\text{Ar}_{\text{K}}/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$
		x10 ⁻²	x10 ⁻³	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	$\pm 1\sigma$
								x10 ⁻²	x10 ⁻⁴			
1	750	10	16.67	6.517	2.360	45.05	24.34	4.24	21.2	3.551 ± 0.184	42.38 ± 2.17	5.996 ± 0.047
2	850	11	6.134	4.353	1.069	11.08	7.196	5.49	47.5	2.936 ± 0.090	35.12 ± 1.07	16.35 ± 0.06
3	950	10	4.243	9.486	2.005	4.518	20.06	8.98	72.0	3.068 ± 0.032	36.67 ± 0.37	23.66 ± 0.05
4	990	13	5.078	17.63	4.009	5.178	13.77	11.4	76.1	3.893 ± 0.037	46.41 ± 0.43	19.72 ± 0.07
5	1020	10	5.483	26.84	4.377	3.789	24.13	15.6	86.1	4.745 ± 0.037	56.41 ± 0.43	18.25 ± 0.04
6	1050	10	5.535	29.17	4.307	3.322	77.04	29.0	88.7	4.929 ± 0.009	58.57 ± 0.10	18.08 ± 0.01
7	1100	15	5.624	29.87	4.179	3.384	187.7	61.7	88.4	4.988 ± 0.007	59.25 ± 0.08	17.80 ± 0.02
8	1150	10	5.690	29.12	4.256	3.822	38.75	68.4	86.3	4.932 ± 0.105	58.60 ± 1.23	17.59 ± 0.32
9	1250	10	5.530	30.30	4.231	2.969	180.8	99.9	90.5	5.022 ± 0.009	59.65 ± 0.10	18.10 ± 0.02
10	1450	14	50.37	32.30	4.216	149.64	0.6638	100	12.8	6.525 ± 0.870	77.13 ± 10.07	1.980 ± 0.018
												29.47 ± 0.56

¹Corrected for backgrounds (mean values in mol): m/e40 = 1.9×10^{-16} ; m/e39 = 1.1×10^{-16} ; m/e38 = 5.3×10^{-17} ; m/e37 = 8.7×10^{-17} ; m/e36 = 1.1×10^{-16} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 293.2 \pm 0.7$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 06-17-2001; Analyzed: 08-29-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar} = 0.0224$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.00030$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.00077$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.006694 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

921 B D TITE (5.6M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_K^2$	$\Sigma^{39}\text{Ar}_K$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_K^4$	Age ⁵	$^{39}\text{Ar}_K/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	10	14.98	7.082	145.9	458.6	14.84	1.79	9.42	1413 ± 0.214	18.15 ± 2.74	6.69 ± 0.04	30.64 ± 0.48
2	600	10	8.867	2.144	136.7	223.0	49.92	7.80	25.5	2263 ± 0.078	29.00 ± 0.99	11.31 ± 0.04	25.18 ± 0.29
3	680	10	5.665	1.703	33.62	77.05	102.2	20.1	59.4	3366 ± 0.032	42.97 ± 0.41	17.73 ± 0.01	13.64 ± 0.19
4	740	18	4.121	1.603	11.15	20.44	167.8	40.3	84.7	3493 ± 0.013	44.57 ± 0.16	24.41 ± 0.03	4.98 ± 0.09
5	780	10	3.965	1.595	13.07	15.68	53.04	46.7	87.6	3478 ± 0.040	44.38 ± 0.50	25.38 ± 0.25	3.97 ± 0.10
6	840	10	4.105	1.571	29.17	21.91	46.50	52.3	83.6	3436 ± 0.022	43.84 ± 0.28	24.51 ± 0.07	5.35 ± 0.16
7	900	17	4.226	1.591	30.40	22.76	53.61	58.8	83.5	3531 ± 0.024	45.05 ± 0.30	23.80 ± 0.07	5.40 ± 0.16
8	1000	11	3.953	1.568	14.10	17.55	106.0	71.5	86.2	3410 ± 0.009	43.52 ± 0.12	25.46 ± 0.02	4.46 ± 0.07
9	1100	10	3.884	1.545	8.979	15.84	176.8	92.8	87.3	3392 ± 0.011	43.29 ± 0.13	25.91 ± 0.03	4.10 ± 0.09
10	1350	16	4.477	1.674	71.25	33.20	59.67	100	77.6	3477 ± 0.017	44.36 ± 0.22	22.46 ± 0.03	7.42 ± 0.12

¹Corrected for backgrounds (mean values in mol): m/e40 = 8.5×10^{-17} ; m/e39 = 4.9×10^{-17} ; m/e38 = 1.9×10^{-17} ; m/e37 = 6.2×10^{-17} ; m/e36 = 3.0×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 293 \pm 1$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-15-2001; Analyzed: 08-03-2001)

²Normalized to 100% delivery to mass spectrometer

³Includes static line blank

⁴Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.0248$; $^{36}\text{Ar}/^{39}\text{Ar}_a = 0.000268$; $^{39}\text{Ar}/^{37}\text{Ar}_a = 0.000719$)

⁵Assumes trapped argon is atmospheric. J-factor = 0.00716 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶Corrected for static line blank and nucleogenic interferences

922 B D TITE (6.6M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	10	26.04	11.95	212.9	816.9	5.229	0.54	7.22	1.888 ± 0.368	24.22 ± 4.69	3.84 ± 0.01	31.39 ± 0.48
2	600	10	9.407	4.151	114.6	237.4	15.71	2.17	25.2	2.377 ± 0.177	30.45 ± 2.25	10.66 ± 0.01	25.27 ± 0.64
3	680	10	5.459	3.783	26.60	73.21	68.41	9.25	59.9	3.273 ± 0.022	41.79 ± 0.28	18.40 ± 0.04	13.46 ± 0.12
4	740	19	4.340	3.697	10.87	29.91	100.9	19.7	79.0	3.432 ± 0.020	43.81 ± 0.25	23.17 ± 0.07	6.92 ± 0.12
5	780	20	3.767	3.654	3.294	7.914	133.5	33.5	93.1	3.508 ± 0.017	44.76 ± 0.22	26.72 ± 0.10	2.11 ± 0.09
6	840	10	3.778	3.628	-4.047	8.330	56.97	39.4	92.6	3.506 ± 0.029	44.74 ± 0.36	26.65 ± 0.05	2.22 ± 0.25
7	900	18	3.630	3.510	123.2	9.525	81.81	47.9	91.7	3.334 ± 0.021	42.56 ± 0.26	27.73 ± 0.07	2.55 ± 0.17
8	1000	10	3.551	3.448	191.2	10.19	106.7	58.9	91.1	3.241 ± 0.015	41.39 ± 0.20	28.35 ± 0.08	2.74 ± 0.11
9	1100	10	3.597	3.597	15.53	7.702	247.9	84.6	93.0	3.346 ± 0.017	42.71 ± 0.21	28.00 ± 0.04	2.14 ± 0.15
10	1350	15	3.846	3.594	91.88	10.03	148.5	100	91.8	3.532 ± 0.018	45.07 ± 0.23	26.17 ± 0.08	2.56 ± 0.12

¹ Corrected for backgrounds (mean values in mol): m/e40 = 2.4×10^{-16} ; m/e39 = 2.6×10^{-17} ; m/e38 = 1.0×10^{-17} ; m/e37 = 1.7×10^{-17} ; m/e36 = 9.7×10^{-18} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 282.6 \pm 1.4$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 02-15-2001; Analyzed: 07-31-2001)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_k = 0.0248$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.000268$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.000719$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007161 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

991 B D TITE (5.6M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}$ ¹	$^{38}\text{Ar}/^{39}\text{Ar}$ ¹	$^{37}\text{Ar}/^{39}\text{Ar}$ ¹	$^{36}\text{Ar}/^{39}\text{Ar}$ ¹	$^{39}\text{Ar}_{\text{K}}$ ²	$\Sigma^{39}\text{Ar}_{\text{K}}$	$^{40}\text{Ar}^*$ ³	$^{40}\text{Ar}*/^{39}\text{Ar}$ ⁴	Age ⁵	$^{39}\text{Ar}_{\text{K}}/^{40}\text{Ar}$ ⁶	$^{36}\text{Ar}/^{40}\text{Ar}$ ⁶	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	10	18.47	14.95	85.45	598.6	6.651	0.71	4.08	0.757 ± 0.134	10.47 ± 1.85	5.42 ± 0.01	32.45 ± 0.25
2	600	10	7.428	3.642	51.20	206.9	10.85	1.87	17.3	1.294 ± 0.040	17.87 ± 0.55	13.51 ± 0.03	27.93 ± 0.18
3	680	10	5.194	3.215	143.1	101.8	40.06	6.14	41.7	2.173 ± 0.026	29.91 ± 0.36	19.35 ± 0.03	19.62 ± 0.17
4	740	16	3.767	3.176	17.40	31.67	92.05	15.9	74.4	2.808 ± 0.009	38.56 ± 0.12	26.72 ± 0.03	8.45 ± 0.07
5	780	11	3.422	3.175	5.769	13.43	78.15	24.3	87.5	3.001 ± 0.004	41.18 ± 0.06	29.44 ± 0.03	3.95 ± 0.03
6	840	10	3.358	3.156	4.952	9.353	75.23	32.3	90.9	3.056 ± 0.009	41.93 ± 0.12	30.01 ± 0.01	2.80 ± 0.09
7	900	10	3.398	3.131	7.814	13.56	72.05	40.0	87.3	2.973 ± 0.007	40.80 ± 0.09	29.65 ± 0.02	4.02 ± 0.06
8	1000	10	3.414	3.039	15.03	17.31	131.2	54.0	84.2	2.878 ± 0.005	39.51 ± 0.07	29.51 ± 0.03	5.10 ± 0.03
9	1100	10	3.215	3.033	5.558	11.06	184.6	73.6	89.0	2.863 ± 0.003	39.31 ± 0.05	31.36 ± 0.02	3.46 ± 0.03
10	1350	10	3.367	3.132	16.53	9.875	247.2	100	90.5	3.051 ± 0.006	41.87 ± 0.09	29.92 ± 0.00	2.94 ± 0.06

¹ Corrected for backgrounds (mean values in mol): m/e40 = 2.8×10^{-16} ; m/e39 = 3.6×10^{-17} ; m/e38 = 1.2×10^{-17} ; m/e37 = 1.3×10^{-17} ; m/e36 = 1.1×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 10-30-2000)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_{\text{K}} = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{ca}} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{ca}} = 0.00086$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007694 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

1243 BIDTITE (4.7M G)

T (°C)	Time (m in.)	$^{40}\text{Ar}/^{39}\text{Ar}$	$^{38}\text{Ar}/^{39}\text{Ar}$	$^{37}\text{Ar}/^{39}\text{Ar}$	$^{36}\text{Ar}/^{39}\text{Ar}$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}*/^{39}\text{Ar}_k^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	x10 ⁻²	x10 ⁻⁴
1	500	37	4.956	4.720	50.48	113.7	28.56	4.29	31.7	1.575 ± 0.018	21.77 ± 0.24	20.28 ± 0.02	23.03 ± 0.12
2	600	14	3.156	3.341	48.43	28.49	21.57	7.53	72.2	2.293 ± 0.038	31.61 ± 0.52	31.94 ± 0.08	9.06 ± 0.40
3	680	38	2.753	3.679	19.81	8.655	133.2	27.5	89.7	2.473 ± 0.003	34.07 ± 0.04	36.66 ± 0.03	3.15 ± 0.03
4	740	26	2.767	4.117	6.195	5.061	103.8	43.1	93.6	2.593 ± 0.004	35.70 ± 0.05	36.47 ± 0.04	1.84 ± 0.03
5	780	21	2.978	4.381	5.734	7.208	45.60	49.9	91.7	2.740 ± 0.008	37.71 ± 0.11	33.87 ± 0.02	2.44 ± 0.09
6	840	44	3.025	4.219	18.49	7.859	38.73	55.8	91.2	2.769 ± 0.015	38.11 ± 0.21	33.33 ± 0.07	2.60 ± 0.16
7	900	7	3.624	3.824	52.23	27.78	4.942	56.5	73.2	2.782 ± 0.179	38.28 ± 2.44	27.79 ± 0.08	7.68 ± 1.68
8	1000	22	2.680	3.833	55.01	5.935	75.45	67.8	92.5	2.484 ± 0.008	34.22 ± 0.11	37.66 ± 0.03	2.18 ± 0.10
9	1100	8	2.793	4.483	24.47	5.305	96.09	82.2	93.4	2.613 ± 0.008	35.98 ± 0.11	36.13 ± 0.02	1.89 ± 0.09
10	1350	41	3.328	4.567	110.6	12.96	118.3	100	87.9	2.929 ± 0.006	40.28 ± 0.08	30.28 ± 0.02	3.84 ± 0.05

¹ Corrected for backgrounds (mean values in mol): m/e40 = 2.9×10^{-16} ; m/e39 = 4.2×10^{-17} ; m/e38 = 1.4×10^{-17} ; m/e37 = 1.4×10^{-17} ; m/e36 = 1.2×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 297.4 \pm 0.8$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 08-16-2000; Analyzed: 10-04-2000)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.0254$; $^{36}\text{Ar}/^{39}\text{Ar}_{\text{Ca}} = 0.000265$; $^{39}\text{Ar}/^{37}\text{Ar}_{\text{Ca}} = 0.00086$)

⁵ Assumes trapped argon is atmospheric. J-factor = 0.007709 (assumes Fish Canyon sandstone = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences

1264 MUSCOVITE (5.9M G)

T (°C)	Time (min.)	$^{40}\text{Ar}/^{39}\text{Ar}^1$	$^{38}\text{Ar}/^{39}\text{Ar}^1$	$^{37}\text{Ar}/^{39}\text{Ar}^1$	$^{36}\text{Ar}/^{39}\text{Ar}^1$	$^{39}\text{Ar}_k^2$	$\Sigma^{39}\text{Ar}_k$	$^{40}\text{Ar}^3$	$^{40}\text{Ar}/^{39}\text{Ar}^4$	Age ⁵	$^{39}\text{Ar}_k/^{40}\text{Ar}^6$	$^{36}\text{Ar}/^{40}\text{Ar}^6$	
		x10 ⁻²	x10 ⁻³	x10 ⁻⁴	x10 ⁻¹⁵	(mol)	(%)	(%)	$\pm 1\sigma$	$\pm 1\sigma$ (Ma)	$\pm 1\sigma$	$\pm 1\sigma$	
											x10 ⁻²	x10 ⁻⁴	
1	500	54	13.90	41.07	97.88	386.0	4.833	0.79	17.5	2.474 ± 0.362	28.86 ± 4.19	7.21 ± 0.09	27.81 ± 0.85
2	600	26	5.513	2.080	184.0	83.44	7.811	2.06	53.9	3.036 ± 0.182	35.35 ± 2.10	18.22 ± 0.19	15.12 ± 1.08
3	700	14	4.481	1.684	367.5	39.74	14.67	4.45	72.8	3.310 ± 0.104	38.50 ± 1.20	22.44 ± 0.17	8.71 ± 0.75
4	800	14	4.518	1.424	14.56	28.88	50.79	12.7	80.2	3.641 ± 0.028	42.30 ± 0.32	22.26 ± 0.04	6.42 ± 0.20
5	850	17	5.013	1.340	4.879	31.46	47.00	20.4	80.6	4.059 ± 0.031	47.10 ± 0.35	20.05 ± 0.05	6.30 ± 0.19
6	900	16	4.950	1.304	2.395	24.01	96.86	36.2	85.0	4.216 ± 0.015	48.90 ± 0.18	20.30 ± 0.02	4.87 ± 0.10
7	950	10	4.630	1.323	2.529	14.90	72.98	48.1	89.7	4.165 ± 0.020	48.32 ± 0.23	21.72 ± 0.03	3.23 ± 0.14
8	1000	22	4.745	1.327	2.667	19.80	93.60	63.3	87.0	4.135 ± 0.015	47.98 ± 0.17	21.19 ± 0.02	4.19 ± 0.10
9	1050	42	4.983	1.362	2.961	24.63	57.28	72.7	84.6	4.230 ± 0.029	49.06 ± 0.34	20.17 ± 0.05	4.97 ± 0.19
10	1150	30	4.849	1.314	3.374	14.21	164.6	99.5	90.7	4.404 ± 0.010	51.05 ± 0.12	20.73 ± 0.02	2.95 ± 0.06
11	1350	15	14.57	3.358	246.3	336.8	3.114	100	31.0	4.610 ± 0.559	53.40 ± 6.38	6.88 ± 0.12	23.12 ± 1.22

¹ Corrected for backgrounds (mean values in mol): m/e40 = 6.2×10^{-16} ; m/e39 = 2.7×10^{-16} ; m/e38 = 7.3×10^{-17} ; m/e37 = 5.4×10^{-17} ; m/e36 = 2.6×10^{-17} , mass discrimination (measured $^{40}\text{Ar}/^{36}\text{Ar}_{\text{ATM}} = 296 \pm 0.5$), abundance sensitivity (5 ppm), and radioactive decay (Irradiated: 10-08-1999; Analyzed: 11-28-1999)

² Normalized to 100% delivery to mass spectrometer

³ Includes static line blank

⁴ Corrected for atmospheric argon and nucleogenic interferences ($^{40}\text{Ar}/^{39}\text{Ar}_a = 0.025$; $^{36}\text{Ar}/^{39}\text{Ar}_a = 0.00025$; $^{39}\text{Ar}/^{37}\text{Ar}_a = 0.0007$)

⁵ Assumes trapped argon is atm atmospheric J-factor = 0.006517 (assumes Fish Canyon sanidine = 27.8 Ma)

⁶ Corrected for static line blank and nucleogenic interferences