

CRONUS-A quartz standard. Complete step-degassing results. 2008-09 measurement cycle.

Sample name	Aliquot	Aliquot weight (g)	Heating temperature (deg C)	Heating time (hr)	Heating system (F/L) ¹	Total ²⁰ Ne released ² (10 ⁹ atoms)	Total ²¹ Ne released ³ (10 ⁶ atoms)	²¹ Ne / ²⁰ Ne ⁴ (10 ⁻³)	²² Ne / ²⁰ Ne ⁴ (10 ⁻³)	Cosmogenic ²¹ Ne ⁵ This heating step (10 ⁶ atoms g ⁻¹)	Cosmogenic ²¹ Ne as % of ²¹ Ne released in this heating step	Percent of total cosmogenic ²¹ Ne released in this step	Total cosmogenic ²¹ Ne (10 ⁶ atoms g ⁻¹)
CRONUS-A	a	0.0558	1100	0.33	L	1.269 ± 0.021	22.99 ± 0.74	17.76 ± 0.33	113.4 ± 2.7	337.7 ± 9.4	82	100	337.7 ± 9.4
			1100	0.3	L	0.028 ± 0.012	0.17 ± 0.09	5.82 ± 3.89	61.4 ± 53.1	--			
	b	0.0692	1100	0.3	L	1.028 ± 0.020	25.68 ± 0.89	24.51 ± 0.60	125.6 ± 2.9	321.4 ± 10.9	87	100	321.4 ± 10.9
			1100	0.33	L	0.019 ± 0.008	0.03 ± 0.08	1.50 ± 4.38	104.2 ± 86.4	--			
	c	0.1084	700	0.3	L	1.246 ± 0.022	40.29 ± 1.51	32.32 ± 0.54	137.6 ± 2.2	338.8 ± 8.7	91	98	346.5 ± 8.8
			1100	0.3	L	0.180 ± 0.013	1.38 ± 0.12	7.62 ± 0.82	108.3 ± 10.8	7.8 ± 1.2			
	d	0.1522	700	0.3	L	1.828 ± 0.044	53.65 ± 2.26	29.31 ± 0.34	127.9 ± 1.2	317.8 ± 8.7	90	97	328.3 ± 8.8
			1100	0.3	L	0.193 ± 0.015	2.16 ± 0.14	11.20 ± 1.08	110.5 ± 11.1	10.49 ± 0.99			
	e	0.1416	400	0.3	L	0.502 ± 0.013	33.62 ± 1.23	65.98 ± 1.97	167.2 ± 5.5	227.9 ± 8.8	96	67	340.8 ± 9.2
			700	0.3	L	1.281 ± 0.016	18.89 ± 0.70	14.52 ± 0.27	118.7 ± 2.2	104.9 ± 2.8			
			1100	0.3	L	0.077 ± 0.012	1.35 ± 0.14	17.24 ± 3.16	219.6 ± 38.5	7.98 ± 0.99			
	Fb	0.2654	400	0.3	F	0.282 ± 0.013	33.53 ± 0.94	114.98 ± 5.43	252.9 ± 12.5	123.6 ± 3.6	98	37	333.0 ± 5.2
			750	0.3	F	2.696 ± 0.033	62.63 ± 1.64	22.47 ± 0.26	127.6 ± 1.6	198.9 ± 3.6			
			1100	0.3	F	0.281 ± 0.031	2.98 ± 0.18	10.25 ± 1.26	130.5 ± 15.6	8.13 ± 0.76			
			1500	0.2	F	0.049 ± 0.016	0.76 ± 0.11	15.10 ± 5.45	212.1 ± 73.5	2.34 ± 0.46			
	Fc	0.3239	1100	0.5	F	4.558 ± 0.099	121.65 ± 4.90	25.72 ± 0.40	130.7 ± 1.5	321.5 ± 9.0	86	99.5	322.9 ± 9.0
			1500	0.2	F	0.023 ± 0.018	0.55 ± 0.11	23.32 ± 18.77	176.6 ± 144.2	1.49 ± 0.37			
	f	0.1350	1100	0.4	L	2.751 ± 0.048	52.82 ± 1.66	19.08 ± 0.40	122.6 ± 1.8	329.6 ± 9.9	84	100	329.6 ± 9.9
	g	0.1385	400	0.3	L	0.678 ± 0.016	31.90 ± 1.03	46.65 ± 1.16	151.0 ± 5.2	216.6 ± 7.5	94	66	325.7 ± 8.5
			750	0.3	L	1.244 ± 0.020	18.30 ± 0.70	14.57 ± 0.38	119.3 ± 2.7	104.7 ± 3.8			
			1100	0.3	L	0.055 ± 0.046	0.77 ± 0.14	13.91 ± 11.92	171.6 ± 147.9	4.4 ± 1.4			

Notes:

¹ L, 75W diode laser; F, resistance furnace

² Computed by comparison to ²⁰Ne signal in air pipettes. 1-sigma uncertainty includes measurement uncertainty of ²⁰Ne signal in this analysis and the reproducibility of the air pipette signal (0.8%)

³ Computed by comparison to ²¹Ne signal in air pipettes. 1-sigma uncertainty includes measurement uncertainty of ²¹Ne signal in this analysis and the reproducibility of the air pipette signal (2%)

⁴ Isotope ratio measured internally during each analysis; does not involve normalization to the Ne isotope signals in the air pipettes.

⁵ Analyses where cosmogenic ²¹Ne was not distinguishable from zero at 1 sigma are not shown. Cosmogenic ²¹Ne concentrations were calculated by normalization to either the ²⁰Ne or ²¹Ne signal in the air pipettes, depending on which method yielded better precision.