表1　林西组长石岩屑砂岩(ABP1-61)锆石原位微区稀土元素分析结果（$\times 10^{-6}$）

Table 1　REE analyses of the detrital zircons in the sandstone (ABP1-61) of the Late Permian Linxi Formation in Aluke'erqin Qi, Inner Mogolia as measured by LA-ICP-MS technique

样品号	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	δEu	δCe
AB61-01	0.49	8.61	0.17	2.43	6.18	0.69	29.83	10.99	134.63	50.76	224.34	54.31	610.34	115.54	0.13	7.24
AB61-02	0.01	0.56	0.05	0.82	3.11	0.1	22.47	10.42	129.02	45.02	190.37	45.33	480.59	89.31	0.03	3.36
AB61-03	0.76	2.21	0.34	2.94	6.22	0.19	42.42	17.93	221.02	76.29	294.35	65.16	650.56	116.67	0.03	1.06
AB61-04	0.05	24.65	0.36	6.51	12.41	1.85	63.57	23.31	293.62	113.38	491.67	112.3	1225.98	230.19	0.16	20
AB61-05	0.07	5.96	0.16	0.98	3.68	0.21	23.86	9.67	108.91	36.57	145.17	34.03	374.9	68.8	0.05	10.15
AB61-06	0.26	6.83	0.37	6.1	10.79	0.42	48.82	16.18	181.23	62.28	252.51	54.84	558.32	100.22	0.05	4.52
AB61-07	0.05	9.11	0.04	1.31	2.31	0.57	15.42	5.35	65.88	23.7	101.32	22.61	245.78	47.21	0.22	51
AB61-08	0.02	1.82	0.02	0.46	1.78	0.09	18.31	8.71	103.41	35.34	140.17	31.65	334.76	59.78	0.03	19.14
AB61-09	0.01	3.83	0.02	0.46	0.93	0.51	4.7	1.85	25.58	10.23	53.62	15.8	215.41	52.69	0.61	43
AB61-10	0.03	8.53	0.28	4.67	8.32	0.83	33.4	10.53	109.66	36.71	146.23	31.13	311.22	57.49	0.13	9.03
AB61-11	0.06	14.2	0.09	1.82	4.23	1.26	19.89	7.25	105.01	41.51	200.94	51.9	616.12	128.64	0.35	39
AB61-12	0.02	16.89	0.04	0.54	1.16	0.47	7.86	3.44	45.16	19.12	100.36	27.86	348.66	68.34	0.35	114
AB61-13	0.06	0.5	0.05	1.37	4.94	0.13	32.8	11.48	120.05	35.33	131.87	26.99	265.47	45.72	0.02	2.11
AB61-14	0.02	1.42	0.03	0.25	0.61	0.26	4.26	1.94	35.55	17.15	98.82	29.45	378.78	76.11	0.36	12.70
AB61-15	0.02	6.83	0.09	0.86	3.18	0.17	20.85	9.28	118.12	42.11	182.07	43.42	467.36	89.35	0.05	21
AB61-16	0.08	13.68	0.31	5.4	7.52	3.02	30.01	9.67	112.41	39.29	177.16	45.04	519.85	107.88	0.53	12.38
AB61-17	0.02	12.39	0.08	1.17	6.07	0.14	27.93	9.63	113.59	41.6	175.34	39.5	421.18	76.53	0.03	45
AB61-18	0.05	12.4	0.09	2.18	6.16	1.47	34.51	12.79	164.88	64.18	287.21	68.85	765.73	151.15	0.24	34
AB61-19	23.42	51.42	5.61	27.76	5.04	0.62	9.14	2.71	31.59	11.21	54.36	14.42	181.78	38.43	0.28	1.06
AB61-20	0.11	33.55	0.09	2.38	4.51	1.33	24.18	8.74	111.46	40.85	186.46	44.61	493.75	93.83	0.31	81
AB61-21	0.03	18.34	0.04	0.8	1.9	0.86	8.86	3.35	39.56	15.72	73.67	19.41	244.16	52.87	0.53	102
AB61-22	0	4.52	0.14	1.94	3.57	0.85	19.02	7.51	94.52	37.54	181.92	48.09	576.23	122.97	0.25	10.39
AB61-23	3.37	13.04	0.86	6.03	3.45	0.6	13.16	4.98	61.11	23.03	104.43	25.71	302.43	59.15	0.24	1.83
AB61-24	0.04	16.22	0.07	1.71	2.6	0.77	14.06	5.1	65.4	24.7	121.57	33.25	415.37	86.84	0.31	56
AB61-25	0.19	6.56	0.09	1.49	3.96	0.96	18.44	7.21	95.15	36.15	166.82	42.13	499.93	97.66	0.29	12.64
AB61-26	0.02	20.4	0.02	0.72	1.72	0.96	11.8	4.32	61.32	25.48	127.2	35.42	467.42	103.75	0.48	241
AB61-27	0.18	8.99	0.1	1.38	3.36	0.83	17.21	6.41	87.55	33.31	150.86	37.08	430.92	85.14	0.27	16.21
AB61-28	0.08	23.96	0.1	1.02	1.87	1.17	12.06	5.36	70.01	30.26	153.25	43.25	543.6	124.53	0.57	56
AB61-29	0.06	35.11	0.09	1.87	4.96	1.62	25.91	10.53	141.08	57.37	268.24	71.39	867.63	176.51	0.35	99
AB61-30	0.08	4.14	0.15	0.93	0.92	0.44	6.8	2.99	29.33	10.64	56	16.95	221.05	47.2	0.39	7.16
AB61-31	0.08	21.75	0.1	1.44	4.05	1.67	24.11	9.36	128.57	52.06	244.28	63.58	739.32	149.21	0.40	54
AB61-32	0.04	1.02	0.03	0.27	2.18	0.06	16.19	7.9	111.04	43.88	195.25	48.08	516.79	95.09	0.02	7.19
AB61-33	0.01	2.86	0.01	0.56	0.98	0.44	4.66	1.6	20.79	8.36	44.4	13.22	178.58	42.09	0.52	64
AB61-34	0.3	18.24	0.16	1.7	5.45	0.64	32.11	12.75	164.87	64.89	288.74	69.29	782.32	144.26	0.12	20
AB61-35	0.02	5.59	0.21	4.48	7.67	0.89	27.44	7.71	71.07	20.97	76.9	15.61	165.83	29.91	0.17	7.93
AB61-36	0.14	12.23	0.12	2.07	3.88	1.5	19.82	6.49	74.19	27.85	127.47	32.94	400.73	83.56	0.42	21
AB61-37	1.45	20.17	0.35	2.34	2.66	0.29	11.45	4.82	61.04	25.02	121.14	31.67	394.18	79.4	0.13	6.76
AB61-38	0.04	16.09	0.04	0.8	2.19	0.44	11.47	4.88	58.04	22.84	104.23	26.89	308.74	58.77	0.22	86
AB61-39	0.01	0.64	0.08	1.35	6.34	0.27	42.81	22.93	342.6	139.38	649.37	164.38	1862.6	331.86	0.04	2.43
AB61-40	0.02	13.89	0.07	1.13	2.78	0.62	14.28	5.33	68.1	27.01	125.07	33.14	399.72	78.59	0.24	53
AB61-41	0.07	8.14	0.07	1.28	4.58	0.58	19.88	7.88	100.75	39.99	173.13	41.51	474.51	88.71	0.16	26
AB61-42	0.29	11.6	0.18	3.31	6.73	1.93	32.39	12.71	163.67	66.19	307.33	78.56	891.75	173.36	0.33	12.38
AB61-43	0.2	40.89	0.54	10.88	19.06	6.56	64.36	20.37	223.51	74.65	310.51	72.4	781.77	145.67	0.52	20
AB61-44	244.63	535.27	83.91	410.1	90.02	1.85	54.25	7.6	55.1	17.19	70.91	17.33	198.98	38.74	0.07	0.91
AB61-45	1.65	18.83	0.44	3.13	4.27	1.67	19	6.97	89.31	34.87	156.36	38.46	434.2	83.36	0.48	5.31
AB61-46	0.03	59.15	0.21	5.27	11.01	2.79	48.5	18.68	236.71	88.79	386.56	95.25	1043.85	197.35	0.31	83
AB61-47	0.2	31.18	0.11	1.15	3.05	1.44	14.89	4.94	64.75	24.96	122.88	34.35	442.69	92.84	0.54	52
AB61-48	0.03	45.23	0.06	1.39	2.46	0.54	13.9	5.36	72.57	30.99	158.7	44.35	561.7	113.85	0.22	210
AB61-49	0.01	38.81	0.12	3.19	6.38	2.47	24.97	8.54	102.1	38.5	169.63	42.49	480.38	92.22	0.52	96
AB61-50	0.18	13.36	0.28	3.69	8.14	0.38	37.44	13.38	157.09	57.36	229.75	53.43	577.13	101.91	0.06	11.87

续表1

样品号	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	δEu	δCe
AB61-51	2.07	22.38	0.66	5.1	4.85	1.09	18.25	6.71	80.81	31.17	140.27	35.05	417.12	81.42	0.31	4.65
AB61-52	0.03	47.04	0.17	3.01	7.77	2.71	39.82	15.11	194.13	76.61	355.55	92.81	1105.53	219.47	0.38	83
AB61-53	0.22	33.85	0.43	6.79	18.08	0.39	87.31	30.26	343.31	112.07	413.95	84.26	802.52	139.37	0.02	20
AB61-54	0.05	5.42	0.23	3.59	4.54	1	14.15	3.46	22.78	5.26	16.03	2.95	25.03	3.55	0.35	6.70
AB61-55	20.53	47.2	4.53	22.29	7.12	1.19	19.74	6.6	80.33	31.44	145.99	38.19	470.74	97.51	0.29	1.15
AB61-56	0.32	22.68	0.18	2.12	3.7	0.62	22.62	8.67	115.59	46.18	213.2	55.27	628.99	127.63	0.16	22
AB61-57	0.03	44.92	0.14	1.19	3.18	1.15	16	6.64	91.81	35.59	168.95	43.56	525.31	106.56	0.40	95
AB61-58	0.03	3.09	0.06	1.28	1.44	0.89	5.24	1.67	24.15	11.02	54.33	15.07	210.92	55.3	0.88	14.23
AB61-59	0.02	9.75	0.29	2.43	12.43	0.57	86.53	35.02	422.84	155.12	663.72	153.68	1599.52	298.66	0.04	10.10
AB61-60	0.03	6.4	0.18	3.74	8.39	1.84	40.17	13.78	159.56	55.54	227.45	52.22	536.46	107.42	0.25	10.18
AB61-61	0.08	21.23	0.13	1.48	3.71	0.94	18.69	5.78	70.93	27.45	119.43	28.28	318.1	64.83	0.28	41
AB61-62	0.09	10.26	0.06	0.61	2.29	0.54	12.68	4.88	65.44	27.17	132.77	35.14	438.9	91.03	0.24	34
AB61-63	0.06	14.05	0.19	5.55	11.62	0.35	56.78	21.74	263.15	95.35	399.95	90.84	925.72	165.58	0.03	20
AB61-64	12.75	47.88	6.15	23.96	10.89	1.58	39.82	13.19	159.83	60.72	254.5	61.96	677.31	125.73	0.21	1.32
AB61-65	17.53	48.52	6.72	37.17	14.73	0.9	27.33	8.05	90.95	33.23	152.23	38.76	441.74	88.7	0.14	1.10
AB61-66	0.02	0.59	0.07	1.04	5.95	0.17	29.73	9.06	77.01	18.11	54.2	9.59	84.86	13.33	0.03	2.45
AB61-67	0.02	0.9	0.02	0.38	2.93	0.37	20.16	7.15	68.03	17.39	52.67	10.27	102.59	17.81	0.11	9.54
AB61-68	0.04	101.95	0.59	8.26	12.03	3.92	40.54	12.71	144.46	51.22	206.68	48.17	523.43	96.16	0.49	52
AB61-69	0.32	29.45	0.31	5.4	9.24	2.11	37.29	12.82	148.43	55.1	240.88	57.88	657.06	128.04	0.30	20
AB61-70	0.34	6.14	0.11	1.41	2.19	0.62	8.81	3.06	31.98	11.89	55.84	14.81	178.27	37.77	0.37	7.77
AB61-71	3.34	23.37	1.12	5.86	5.73	0.68	27.27	8.8	109.24	40.21	179.01	44.2	475.03	95.9	0.14	2.95
AB61-72	0.01	0.56	0.11	1.15	2.27	0.16	18.89	10.62	141.91	53.01	233.19	58.31	669.23	128.4	0.05	1.58
AB61-73	0.06	7.49	0.29	5.15	10.76	0.86	41.33	14.1	159.28	55.81	231.75	51.89	541.88	97.47	0.11	7.32
AB61-74	3.27	10.71	0.66	2.95	1.27	0.26	4.1	1.67	18.48	7.42	36.05	10.12	125.99	26.85	0.32	1.69
AB61-75	0.19	7.2	0.12	1.46	3.73	0.21	18.57	5.9	71.32	25.08	103.53	23.72	256.52	45.59	0.06	11.71
AB61-76	0.15	0.54	0.05	0.41	1.23	0.19	5.39	2.17	27.42	10.51	45.57	11.23	123.91	25.1	0.19	1.45
AB61-77	153.78	392.36	51.56	255.46	61.21	4.07	66.77	14.5	145.05	48.19	207.65	50.88	579.37	119.09	0.19	1.08
AB61-78	0.07	5.36	0.1	2.07	3.28	1.12	13.08	4.63	53.89	19.72	82.29	21.37	256.27	48.01	0.45	12.64
AB61-79	0.04	8.01	0.16	2.62	4.87	2.07	19.15	5.86	60.21	20.05	85.8	20.28	232.46	45.14	0.57	14.02
AB61-80	0.17	45.51	0.29	5.46	10.27	3.32	49.06	18.12	231.17	88.71	404.05	106.64	1286.55	259.26	0.37	39
AB61-81	86.42	156.48	19.26	74.91	13.32	1.19	21.05	5.87	66.16	22.57	96.69	23.2	269.72	51.65	0.22	0.90
AB61-82	0.12	4.37	0.08	0.58	1.31	0.52	6.55	2.47	33.56	15.83	85.5	26.31	365.03	86.41	0.44	10.86
AB61-83	0.06	1.39	0.13	2.72	3.97	0.14	31.88	14.95	185.37	65.23	263.09	59.91	620.41	107.82	0.03	2.85
AB61-84	0.12	11.65	0.11	1.29	2.07	0.44	16.9	6.04	70.26	22.92	96.72	21.93	215.74	37.77	0.16	22
AB61-85	1.61	16.23	0.38	1.99	1.28	0.31	8.87	3.13	43.59	17.85	95.47	24.77	332.95	74.69	0.21	4.91
AB61-86	1.48	15.66	0.43	4.32	4.37	1.19	20.65	6.99	90.36	35.43	156.81	38.63	448.74	85.33	0.32	4.74
AB61-87	0.03	6.28	0.21	2.47	4.92	0.87	19.02	5.35	55.2	18.42	75.64	17.21	178.14	31.84	0.24	8.86
AB61-88	0.15	21.24	0.11	1.63	4.52	2.25	21.34	7.85	99.89	39.18	190.38	51.82	663.39	135.98	0.58	39
AB61-89	0.12	13.02	0.06	1.09	3.09	2.07	13.06	4.7	51.85	18.91	79.11	19.21	214.56	41.51	0.85	37
AB61-90	0.04	7.69	0.1	1	2.44	0.39	12.27	4.99	63	22.79	105.27	27.16	332.44	64.42	0.18	19.82
AB61-91	0.09	0.97	0.1	1.37	6.31	0.19	37.56	15.38	176.07	59.24	233.26	52.6	544.84	99.22	0.03	2.25
AB61-92	0.02	6.09	0.27	1.12	3.86	0.11	22.98	9.33	117.61	44.82	199.77	47.55	540.92	101.14	0.03	6.79
AB61-93	0.01	11.69	0.14	2.2	3.56	0.88	21.84	7.08	92.63	34.59	158.22	40.53	459.68	91.29	0.23	24
AB61-94	0.03	3.6	0.08	1.22	2.51	0.81	12.39	5.71	85.25	30.94	126.23	29.89	333.69	61.31	0.37	12.53
AB61-95	0.03	0.69	0.12	1.62	5.92	0.07	47.1	23.79	331.57	132.5	591.15	142.72	1491.32	256.72	0.01	1.58
AB61-96	0.05	8.2	0.2	3.83	9.02	0.57	36.22	12.49	151.19	53.31	222.68	51.81	542.08	94.76	0.08	11.83
AB61-97	0.13	3.76	0.06	1.2	2.79	0.14	20.63	8.66	115.13	43.15	189.57	45.25	503.49	90.74	0.04	10.32
AB61-98	0.07	11.53	0.06	0.74	2.27	0.2	8.81	4.24	61.51	25.29	121.35	34.84	432.94	87.07	0.12	43
AB61-99	0.09	24.33	0.49	9.81	15.45	2.38	53.31	14.61	142.96	44.66	162.02	34.68	360.21	60.02	0.23	14.35
AB61-100	0.05	2.99	0.4	7.4	15.12	1.55	67.3	22.84	252.62	87.31	342.99	78.3	813.66	145.17	0.13	2.18

注：$\delta Eu = Eu/Eu^* = Eu_{CN}/(Sm_{CN} \times Gd_{CN})^{1/2}$；$\delta Ce = Ce/Ce^* = Ce_{CN}/(La_{CN} \times Pr_{CN})^{1/2}$，标准化值引自 Sun S S and McDonough, 1989.

表2　林西组长石岩屑砂岩中碎屑(ABP1-61)锆石LA-ICP-MS U-Pb分析结果

Table 2　The U-Pb isotope composition of the detrital zircons in the sandstone (ABP1-61) of the Late Permian Linxi Formation in Aluke'erqin Qi, Inner Mogolia as measured by LA-ICP-MS technique

测试点	含量/($\times10^{-6}$)			Th/U	同位素比值						年龄					
	Th	U	Pb		$^{207}Pb/^{206}Pb$	±1σ	$^{207}Pb/^{235}U$	±1σ	$^{206}Pb/^{238}U$	±1σ	$^{207}Pb/^{206}Pb$	±1σ	$^{207}Pb/^{235}U$	±1σ	$^{206}Pb/^{238}U$	±1σ
AB61-01	117.34	292.76	12.45405	0.40081	0.05148	0.0023	0.28944	0.01303	0.04076	0.00077	262	69	258	10	258	5
AB61-02	44.61	303.54	49.87749	0.14697	0.07057	0.00155	1.61657	0.03884	0.16609	0.00287	945	24	977	15	991	16
AB61-03	65.97	298.79	45.79897	0.22079	0.06971	0.00168	1.46089	0.03764	0.15197	0.00267	920	26	914	16	912	15
AB61-04	344.29	370.49	31.4268	0.92928	0.05582	0.0015	0.55352	0.01558	0.0719	0.00128	445	33	447	10	448	8
AB61-05	75.14	267.73	48.23417	0.28066	0.07655	0.00164	1.83517	0.04335	0.17382	0.00299	1109	23	1058	16	1033	16
AB61-06	147.05	266.66	65.00166	0.55145	0.08494	0.00175	2.58362	0.05917	0.22056	0.00378	1314	21	1296	17	1285	20
AB61-07	52.37	104.33	20.53367	0.50196	0.0757	0.00213	1.89931	0.05534	0.18193	0.00338	1087	30	1081	19	1078	18
AB61-08	75.35	604.94	47.00034	0.12456	0.05554	0.00124	0.61284	0.01498	0.08001	0.00137	434	27	485	9	496	8
AB61-09	44.09	118.61	6.48261	0.37172	0.05311	0.00296	0.389	0.02111	0.05312	0.00126	333	80	334	15	334	8
AB61-10	174.09	494.92	59.05554	0.35175	0.06255	0.00163	0.9754	0.02687	0.11308	0.002	693	30	691	14	691	12
AB61-11	69.94	133.58	5.995768	0.52358	0.0516	0.00304	0.30058	0.01733	0.04224	0.00099	268	89	267	14	267	6
AB61-12	82.28	341.21	27.55466	0.24114	0.05733	0.00161	0.64542	0.01895	0.08163	0.00147	504	34	506	12	506	9
AB61-13	47.15	287.02	46.14968	0.16427	0.07125	0.00162	1.59141	0.03925	0.16196	0.00282	965	25	967	15	968	16
AB61-14	25.45	639.88	27.86154	0.03977	0.05199	0.00168	0.32589	0.01093	0.04546	0.00081	285	45	286	8	287	5
AB61-15	124.41	609.06	48.34533	0.20427	0.05713	0.00137	0.63153	0.01631	0.08016	0.00139	497	29	497	10	497	8
AB61-16	235.8	269.25	13.15376	0.87577	0.05158	0.00236	0.29636	0.01351	0.04167	0.00086	267	67	264	11	263	5
AB61-17	197.3	359.5	30.42961	0.54882	0.05694	0.00168	0.61556	0.01877	0.0784	0.00144	489	36	487	12	487	9
AB61-18	199.78	379.01	16.76642	0.52711	0.0515	0.00225	0.29565	0.01291	0.04163	0.00083	263	64	263	10	263	5
AB61-19	207.72	647.72	27.21141	0.32069	0.05157	0.00158	0.29337	0.0093	0.04125	0.00075	266	41	261	7	261	5
AB61-20	93.2	112.14	5.280098	0.8311	0.05157	0.00443	0.28601	0.02416	0.04022	0.00103	266	144	255	19	254	6
AB61-21	252.81	308.84	14.31635	0.81858	0.05126	0.00245	0.28598	0.01363	0.04046	0.00083	253	72	255	11	256	5
AB61-22	46.61	149.18	33.83081	0.31244	0.08217	0.00223	2.48079	0.07016	0.21894	0.00408	1250	28	1266	20	1276	22
AB61-23	68.54	149.86	6.81723	0.45736	0.0519	0.00329	0.31079	0.01923	0.04343	0.00106	281	97	275	15	274	7
AB61-24	284.64	586.32	26.85375	0.48547	0.05158	0.00158	0.30609	0.00966	0.04303	0.00079	267	40	271	8	272	5
AB61-25	118.97	250.87	10.80178	0.47423	0.05144	0.00225	0.28984	0.01255	0.04086	0.00086	261	61	258	10	258	5
AB61-26	188.59	624.45	27.35154	0.30201	0.05171	0.00157	0.30723	0.00966	0.04309	0.00079	273	40	272	8	272	5
AB61-27	96.83	157.15	7.489874	0.61616	0.05107	0.00293	0.30541	0.01709	0.04337	0.00104	244	85	271	13	274	6
AB61-28	161.56	227.39	14.72249	0.7105	0.05376	0.0023	0.43065	0.01833	0.05809	0.0012	361	59	364	13	364	7
AB61-29	155.49	207.9	9.70037	0.74791	0.05145	0.00241	0.29488	0.01365	0.04157	0.00088	261	68	262	11	263	5
AB61-30	46.19	667.37	63.59245	0.06921	0.05907	0.00191	0.79622	0.02186	0.09776	0.00166	570	72	595	12	601	10
AB61-31	103.72	163.14	7.3929	0.63577	0.05141	0.00325	0.29284	0.01825	0.0413	0.00095	259	101	261	14	261	6
AB61-32	45.33	384.4	52.20121	0.11792	0.06788	0.00158	1.29735	0.0327	0.13861	0.00243	865	26	845	14	837	14
AB61-33*	10.47	68.28	26.18621	0.15334	0.19573	0.00621	9.343	0.23847	0.3462	0.00654	2791	53	2372	23	1916	31
AB61-34	247.89	493.86	26.40529	0.50194	0.05283	0.00174	0.36504	0.01235	0.0501	0.00092	322	44	316	9	315	6
AB61-35	113.55	274.35	23.86259	0.41389	0.05838	0.00187	0.67102	0.02215	0.08336	0.00154	544	41	521	13	516	9
AB61-36	179.91	276.23	11.9132	0.65131	0.04875	0.0025	0.25833	0.01304	0.03843	0.00086	136	76	233	11	243	5
AB61-37	211.34	409.83	18.14637	0.51568	0.05158	0.00182	0.29482	0.01056	0.04145	0.00079	267	48	262	8	262	5
AB61-38	55.96	104.14	23.96285	0.53735	0.08097	0.0024	2.33154	0.07103	0.20884	0.00399	1221	32	1222	22	1223	21
AB61-39	76.9	767.73	83.32772	0.10017	0.06222	0.00139	0.9634	0.02359	0.1123	0.00194	682	26	685	12	686	11
AB61-40	156.51	370.87	15.45174	0.42201	0.0513	0.00199	0.28191	0.011	0.03985	0.00078	254	54	252	9	252	5

续表2

测试点	含量/(×10⁻⁶)			Th/U	同位素比值						年龄					
	Th	U	Pb		$^{207}Pb/^{206}Pb$	±1σ	$^{207}Pb/^{235}U$	±1σ	$^{206}Pb/^{238}U$	±1σ	$^{207}Pb/^{206}Pb$	±1σ	$^{207}Pb/^{235}U$	±1σ	$^{206}Pb/^{238}U$	±1σ
AB61-41	63.85	225.87	48.34783	0.28268	0.08238	0.00202	2.3515	0.06199	0.20701	0.00368	1255	26	1228	19	1213	20
AB61-42	216.89	462.79	19.39345	0.46866	0.05029	0.00189	0.27378	0.01036	0.03948	0.00077	208	52	246	8	250	5
AB61-43	199.19	133.16	7.594421	1.49587	0.04818	0.00272	0.28223	0.01554	0.04248	0.001	108	82	252	12	268	6
AB61-44*	142.19	227.51	67.88238	0.62498	0.1166	0.0026	4.45869	0.10867	0.27733	0.0049	1905	21	1723	20	1578	25
AB61-45	119.78	159.83	7.779489	0.74942	0.05103	0.00265	0.30737	0.0156	0.04369	0.00101	242	75	272	12	276	6
AB61-46	275.24	303.58	14.96631	0.90665	0.0513	0.00215	0.29482	0.01231	0.04168	0.00086	254	59	262	10	263	5
AB61-47	164.01	338.76	18.79258	0.48415	0.05285	0.00195	0.3803	0.01413	0.05218	0.00103	322	49	327	10	328	6
AB61-48	262.17	396.45	20.68829	0.66129	0.05221	0.00256	0.33615	0.01648	0.0467	0.00094	295	75	294	13	294	6
AB61-49	103.84	98.54	7.44795	1.05379	0.05426	0.00415	0.46365	0.03459	0.06197	0.00165	382	120	387	24	388	10
AB61-50	202.67	330.93	15.68155	0.61243	0.05157	0.00205	0.30674	0.01221	0.04314	0.00087	266	55	272	9	272	5
AB61-51	101.3	150.03	6.963599	0.6752	0.05163	0.00321	0.29403	0.01792	0.0413	0.00099	269	96	262	14	261	6
AB61-52	257.13	299.23	14.45876	0.85931	0.05143	0.00217	0.29627	0.01248	0.04177	0.00085	260	60	263	10	264	5
AB61-53	356.88	314.75	58.58842	1.13385	0.07066	0.0019	1.45982	0.04137	0.14984	0.00273	948	30	914	17	900	15
AB61-54	392.04	1015.64	86.21832	0.386	0.05722	0.00136	0.64604	0.01664	0.08188	0.00143	500	28	506	10	507	9
AB61-55	221.75	328.78	15.15888	0.67446	0.05162	0.00316	0.29504	0.01803	0.04145	0.00085	269	102	263	14	262	5
AB61-56	178.77	309.33	14.14449	0.57793	0.05143	0.00226	0.29996	0.01314	0.0423	0.00087	260	63	266	10	267	5
AB61-57	190.01	223.49	13.10759	0.85019	0.05304	0.00275	0.37464	0.01934	0.05123	0.00107	331	79	323	14	322	7
AB61-58	69.02	136.7	8.44164	0.5049	0.05402	0.00367	0.4329	0.02846	0.05812	0.00158	372	99	365	20	364	10
AB61-59	189.09	584.53	50.12599	0.32349	0.05708	0.00179	0.66547	0.02147	0.08455	0.00159	495	39	518	13	523	9
AB61-60	120.41	131.96	7.20135	0.91247	0.05197	0.00362	0.32158	0.02182	0.04488	0.00116	284	108	283	17	283	7
AB61-61	119.16	117.64	20.52017	1.01292	0.06634	0.00284	1.33455	0.05638	0.1459	0.0032	817	52	861	25	878	18
AB61-62	98.58	172.53	9.86422	0.57138	0.05294	0.00285	0.38495	0.02044	0.05274	0.00119	326	80	331	15	331	7
AB61-63	368.93	784.24	166.2968	0.47043	0.07985	0.0018	2.17521	0.05377	0.19755	0.00345	1193	24	1173	17	1162	19
AB61-64	199.42	316.95	14.38217	0.62918	0.05139	0.0031	0.29371	0.01752	0.04145	0.00093	258	96	261	14	262	6
AB61-65	204.62	574.15	24.90554	0.35639	0.05166	0.00189	0.30258	0.01124	0.04248	0.00082	270	50	268	9	268	5
AB61-66	35.38	274.36	44.27346	0.12895	0.07027	0.00184	1.59825	0.04442	0.16495	0.00299	936	29	970	17	984	17
AB61-67	20.08	975.28	74.99227	0.02059	0.05849	0.00156	0.66012	0.01871	0.08185	0.00147	548	32	515	11	507	9
AB61-68	61.7	71.23	3.995826	0.86621	0.05225	0.00493	0.34614	0.03182	0.04804	0.00143	296	153	302	24	302	9
AB61-69	146.51	160.55	58.855	0.91255	0.10072	0.0026	4.2561	0.11652	0.30647	0.00566	1637	26	1685	23	1723	28
AB61-70	111.46	268.78	11.71232	0.41469	0.05165	0.00281	0.29942	0.01615	0.04204	0.00091	270	84	266	13	265	6
AB61-71	469.37	1090.33	49.63934	0.43048	0.0515	0.00182	0.31277	0.01124	0.04405	0.00085	263	48	276	9	278	5
AB61-72	38.31	451.16	70.87183	0.08491	0.0711	0.00181	1.59629	0.04352	0.16282	0.00293	960	28	969	17	972	16
AB61-73	34.39	71.23	18.14488	0.4828	0.08779	0.00304	2.83589	0.09918	0.23428	0.00482	1378	37	1365	26	1357	25
AB61-74	113.81	363.25	15.78221	0.31331	0.05178	0.00224	0.30776	0.01331	0.0431	0.00089	276	62	272	10	272	6
AB61-75	92.41	255.94	15.50952	0.36106	0.05407	0.0026	0.43897	0.02106	0.05888	0.00122	374	71	370	15	369	7
AB61-70	111.46	268.78	11.71232	0.41469	0.05165	0.00281	0.29942	0.01615	0.04204	0.00091	270	84	266	13	265	6
AB61-76	11.77	35.72	3.320471	0.32951	0.05889	0.00534	0.7418	0.06535	0.09135	0.00281	563	139	563	38	564	17
AB61-77	186.66	265.49	12.70698	0.70308	0.05456	0.00403	0.31724	0.0232	0.04217	0.00096	394	123	280	18	266	6
AB61-78	40.47	76.42	6.59703	0.52957	0.05719	0.00459	0.63118	0.04893	0.08005	0.00241	499	118	497	30	496	14
AB61-79	52.73	124.74	81.69017	0.42272	0.19387	0.00474	15.22337	0.40021	0.56948	0.01057	2775	21	2829	25	2906	43
AB61-80	335.39	367.84	18.63277	0.91178	0.05173	0.00227	0.3087	0.01349	0.04328	0.00091	273	62	273	10	273	6
AB61-81	62.4	160.4	7.44762	0.38903	0.05231	0.00525	0.32	0.03179	0.04436	0.00112	299	178	282	24	280	7

续表2

测试点	含量/(×10⁻⁶)			Th/U	同位素比值						年龄					
	Th	U	Pb		$^{207}Pb/^{206}Pb$	±1σ	$^{207}Pb/^{235}U$	±1σ	$^{206}Pb/^{238}U$	±1σ	$^{207}Pb/^{206}Pb$	±1σ	$^{207}Pb/^{235}U$	±1σ	$^{206}Pb/^{238}U$	±1σ
AB61-82	19.95	64.39	4.087861	0.30983	0.05423	0.0049	0.46411	0.041	0.06206	0.00176	381	148	387	28	388	11
AB61-83	54.37	276.51	44.50181	0.19663	0.07229	0.00222	1.60745	0.05129	0.16126	0.00303	994	36	973	20	964	17
AB61-84*	41	120.07	60.4098	0.34147	0.17875	0.00456	11.05219	0.30005	0.4484	0.00842	2641	22	2528	25	2388	37
AB61-85	119.04	197.78	9.67196	0.60188	0.05192	0.00349	0.32137	0.02114	0.04489	0.00112	282	105	283	16	283	7
AB61-86	70.95	109.61	4.956357	0.64729	0.05121	0.00407	0.28995	0.02247	0.04106	0.00114	250	126	259	18	259	7
AB61-87	71.1	487.4	47.26086	0.14588	0.06188	0.00197	0.82315	0.02714	0.09647	0.00182	670	39	610	15	594	11
AB61-88	232.94	494.65	40.81267	0.47092	0.05694	0.00189	0.61081	0.02085	0.07779	0.00149	489	43	484	13	483	9
AB61-89	30.98	31.96	1.57109	0.96934	0.05124	0.01284	0.29128	0.07228	0.04123	0.00172	252	395	260	57	260	11
AB61-90	111.31	596.94	98.74739	0.18647	0.08338	0.00215	1.89385	0.05224	0.16473	0.00298	1278	27	1079	18	983	16
AB61-91	79.03	591.57	88.88606	0.13359	0.06929	0.00191	1.47322	0.04292	0.1542	0.00284	907	31	919	18	924	16
AB61-92	267.12	621.82	52.53672	0.42958	0.05732	0.00189	0.6402	0.02177	0.08099	0.00152	504	43	502	13	502	9
AB61-93	138.67	203.48	12.14328	0.68149	0.05306	0.00361	0.39037	0.0263	0.05335	0.00122	331	111	335	19	335	7
AB61-94	44.91	438.19	64.34583	0.10249	0.07169	0.00207	1.46799	0.04462	0.14849	0.00274	977	33	917	18	892	15
AB61-95	133.37	561.17	90.79589	0.23766	0.07051	0.002	1.56327	0.04654	0.16078	0.00298	943	32	956	18	961	17
AB61-96	81.18	186.89	47.89624	0.43437	0.08818	0.00261	2.91654	0.09	0.23985	0.00459	1386	31	1386	23	1386	24
AB61-97	175.44	527.36	87.01101	0.33268	0.07017	0.00206	1.55163	0.04762	0.16036	0.00301	933	34	951	19	959	17
AB61-98	101.94	382.95	63.58071	0.2662	0.07169	0.00216	1.61955	0.05077	0.16382	0.0031	977	34	978	20	978	17
AB61-99	278.78	248.78	31.54983	1.12059	0.06112	0.00248	0.86005	0.0354	0.10205	0.00202	643	55	630	19	626	12
AB61-100	121.66	209.97	45.79049	0.57942	0.07804	0.00236	2.14056	0.06741	0.19891	0.0038	1148	34	1162	22	1169	20

注：*为不谐和年龄