TABLE 2. Chemical composition (in ppmw) of trace elements of freshwater pearls and shells from Lake Kasumigaura (Japan) and Lake Taihu (China), analyzed by LA-ICP-MS.

Lake Kasumigaura, Japan: Pearl	Sample	^{7}Li	^{11}B	^{23}Na	^{24}Mg	^{27}Al	^{31}P	^{39}K	^{45}Sc	^{47}Ti	^{55}Mn	^{57}Fe	^{59}Co	^{60}Ni	^{63}Cu	^{66}Zn	^{69}Ga	^{88}Sr	^{137}Ba
Cream	KSM-W-001	0.09	17.08	3555	43.09	bdl	463	28.492	0.18	bdl	2510	1111	0.415	2.02	0.687	bdl	0.86	1172	45.93
	KSM-W-002	0.11	17.7	3696	148.1	bdl	466	44.157	0.212	bdl	777	1105	0.381	1.73	2.464	bdl	0.56	1175	24.94
	KSM-W-003	0.09	16.15	4149	125.7	bdl	686	37.816	0.146	bdl	1079	1254	0.439	1.99	4.577	11.4	0.74	1131	31.47
	KSM-W-004	0.07	14.55	3188	84.14	bdl	531	62.453	0.161	bdl	4156	1112	0.414	1.81	0.922	1.6	1.02	1201	49.81
Light yellow	KSM-MW-005	0.12	13.76	4166	59.69	bdl	629	58.306	bdl	bdl	1355	1098	0.395	2.04	2.805	14.4	0.96	1275	48.93
	KSM-MW-006	0.13	15.41	3487	84.24	bdl	680	62.176	0.182	bdl	5671	1103	0.365	1.91	1.99	0.44	1.06	1045	51.45
	KSM-MW-007	0.07	14.03	3697	77.91	bdl	562	40.634	bdl	bdl	2158	1093	0.439	2.16	0.822	2.33	0.69	1083	38.1
	KSM-MY-008	0.09	14.3	3463	78.56	bdl	689	36.484	0.129	bdl	5551	1120	0.467	1.96	1.876	2.68	1.1	1090	48.7
Pink	KSM-Pink-009	0.07	15.28	3873	26.94	bdl	455	41.937	0.13	bdl	1014	1026	0.393	1.71	0.482	bdl	0.54	816	30.19
	KSM-Pink-010	0.06	12.68	3574	96.37	bdl	581	29.377	bdl	bdl	1919	994	0.363	1.83	0.652	bdl	0.83	1080	42.37
	KSM-Pink-011	0.09	12.9	3845	86.37	bdl	593	44.679	0.125	bdl	1318	979	0.363	1.7	0.708	bdl	0.79	1163	44.27
	KSM-Pink-012	0.05	13.83	3198	85.52	bdl	505	29.224	bdl	bdl	1695	898	0.316	1.56	0.492	bdl	0.74	974	39.42
	KSM-Pink-013	0.12	13.16	3977	91.76	bdl	623	40.78	bdl	bdl	1401	980	0.363	1.95	0.853	bdl	0.97	1179	46.08
Orange	KSM-Ora-014	0.07	12.97	4191	63.18	bdl	558	35.091	bdl	bdl	1725	1011	0.428	2.18	0.568	bdl	0.7	1245	32.57
Purple	KSM-Pur-015	0.1	15.56	4047	90.35	bdl	840	49.78	0.1	bdl	3155	1170	0.43	2.35	1.004	6.37	0.81	1457	40.92
	KSM-pPur-016	0.09	15.34	3648	86.06	bdl	791	33.17	bdl	bdl	3098	1069	0.383	2.02	0.855	5.83	0.74	1338	38.29
	KSM-Pur-017	0.1	14.85	4139	138.8	bdl	715	75.731	bdl	bdl	4357	1098	0.403	2.28	1.467	6.68	1.22	1436	58.83
	KSM-Pur-018	bdl	21.07	7436	158.8	bdl	802	24.305	bdl	bdl	1091	913	0.323	1.89	1.059	6.85	1.27	1129	52.82
	KSM-Pur-TD	bdl	17.73	8731	146.3	bdl	750	20.116	bdl	bdl	913.4	858	0.221	1.6	1.055	7.81	0.99	1058	46.04
Golden with orient	KSM-GY-019	0.06	14.3	5164	58.61	bdl	310	18.732	bdl	bdl	821.8	563	bdl	0.92	0.653	11.5	0.84	775	43.02
	KSM-GY-020	0.09	13.88	3696	242.3	bdl	872	24.169	bdl	bdl	3176	1042	0.391	1.94	10.83	1.93	1.3	1459	68.6
	KSM-GY-021	bdl	11.5	4108	53.79	bdl	330	36.186	bdl	bdl	636	544	bdl	0.8	0.908	3.48	0.84	560	46.91
	KSM-GY-022	0.09	12.44	3575	165.2	bdl	814	42.906	bdl	bdl	2483	1036	0.418	2.07	14.34	0.78	1.57	1461	73.25
	KSM-GY-023	bdl	16.3	4260	71.93	bdl	317	32.398	bdl	bdl	1911	520	bdl	0.82	1.362	9.95	0.75	662	47.05
Light orange KSM-Ora-half-024	Outer part of nacreous layer of pearl, spot 1	bdl	17.22	7024	175.1	bdl	392	13.423	0.438	bdl	1401	603	0.258	1.17	0.756	10.8	1.33	1000	72.01
	Near the inner layer, spot 2	0.08	13.24	6953	175.4	bdl	376	45.249	0.266	bdl	378.2	579	0.203	0.96	0.847	14.2	0.64	780	33.35
	Near the inner layer, spot 3	bdl	11.05	7023	128.6	bdl	300	49.173	bdl	bdl	293.3	542	0.14	1.14	0.719	5.93	0.52	695	26.26
	Near the inner layer, spot 4	bdl	12.06	6974	53.61	bdl	229	70.857	bdl	bdl	391.8	550	0.175	1.12	0.781	7.34	0.49	659	23.06
	Near the inner layer, spot 5	bdl	14.12	8420	118.8	bdl	257	30.94	bdl	bdl	361.3	638	0.24	1.11	0.646	8.16	0.48	710	22.06
	Near the inner layer, spot 6	bdl	16.73	8926	174.6	bdl	342	6.3969	0.21	bdl	302.8	627	0.246	1.21	0.869	12.3	1.35	996	55.41
	Near the inner layer, spot 7	bdl	15.61	9528	361.5	bdl	237	31.584	0.432	bdl	519.3	654	0.177	1.35	0.77	15	0.75	876	39.66
	Inner part of the layer (near bead, spot 8)	0.11	17.43	9800	432.7	bdl	245	60.375	0.498	bdl	423	735	0.268	1.33	0.825	7.94	0.98	941	42.42
Lake Kasumigaura, Japan: Shell	Sample	^{7}Li	^{11}B	^{23}Na	^{24}Mg	^{27}Al	^{31}P	^{39}K	^{45}Sc	^{47}Ti	^{55}Mn	^{57}Fe	^{59}Co	^{60}Ni	^{63}Cu	^{66}Zn	^{69}Ga	^{88}Sr	^{137}Ba
KSM-SHELL-001 Cut surface position	Outer part of shell spot 1 (prismatic)	0.24	5.815	12872	47.5	28.25	267	62.625	bdl	13.5	395.2	810	0.335	2.12	5.078	9.91	0.49	883	32.42
	Spot 2	bdl	4.525	9144	27.67	13.2	155	77.46	bdl	4.34	972.1	625	0.191	1.27	1.249	4	0.56	722	29.22
	Spot 3	bdl	4.244	7279	12.26	bdl	147	28.027	bdl	bdl	797.3	474	0.16	1.07	0.252	0.25	1.32	556	65.81
	Inner part of shell, spot 4	bdl	3.365	6143	33.01	bdl	191	92.327	bdl	bdl	1574	403	0.14	0.81	0.226	bdl	0.3	731	22.94
Lake Kasumigaura, Japan: Shell	Sample	^{7}Li	^{11}B	^{23}Na	^{24}Mg	^{27}Al	^{31}P	^{39}K	^{45}Sc	^{47}Ti	^{55}Mn	^{57}Fe	^{59}Co	^{60}Ni	^{63}Cu	^{66}Zn	^{69}Ga	^{88}Sr	^{137}Ba
KSM-SHELL-002 Cut surface position	Outer part of shell spot 1 (prismatic)	bdl	3.096	9891	42.07	10.2	385	25.178	bdl	12	427.9	801	bdl	1.69	26.95	20.4	0.58	563	18.79
	Spot 2	0.05	4.157	6744	40.12	bdl	375	44.251	bdl	bdl	517.2	689	0.104	0.97	0.507	3.98	0.23	475	11.1
	Spot 3	0.13	4.456	6751	60.67	bdl	372	72.393	bdl	bdl	610.4	707	bdl	1.09	0.424	4.83	0.28	490	14.6
	Spot 4	0.1	4.831	6358	81.53	bdl	366	74.44	bdl	bdl	677.5	727	bdl	1.23	0.345	1.84	0.62	632	23.13
	Spot 5	0.08	5.001	6747	45.03	bdl	371	91.306	bdl	bdl	949.9	693	bdl	1.64	0.311	4.33	0.3	514	19.85
	Spot 6	0.09	5.391	5143	34.76	bdl	368	83.539	bdl	bdl	705.1	594	bdl	0.64	4.424	86.2	0.3	577	19.04
	Spot 7	0.09	5.502	4844	27.95	bdl	367	107.76	bdl	bdl	780.2	516	bdl	bdl	0.126	4.35	0.36	617	21.15
	Inner part of shell, spot 8	0.11	5.389	4436	43.82	bdl	368	118.64	bdl	bdl	1240	501	bdl	0.85	9.511	0.2	0.24	632	22.39
KSM-SHELL-003 Cut surface position	Outer part of shell spot 1 (prismatic)	0.06	3.44	13519	73.72	139.6	410	104.13	bdl	21.8	1065	894	0.52	3.2	7.756	14.2	1.02	1096	53.14
	Spot 2	0.05	10.25	9069	87.25	bdl	258	30.605	bdl	5.83	1165	703	0.217	1.61	1.202	0.92	0.75	1092	37.03
	Spot 3	bdl	11.57	8097	35.83	bdl	197	75.058	0.332	bdl	1192	631	0.179	1.36	0.266	0.68	0.41	746	22.43
	Spot 4	0.05	7.965	7943	27.97	bdl	211	39.239	bdl	bdl	1435	571	0.201	0.92	0.391	bdl	0.35	823	21.99
	Inner part of shell, spot 5	bdl	9.947	7154	21.84	bdl	206	70.981	bdl	bdl	1641	592	0.193	1.61	0.537	0.65	0.73	961	36.01
Lake Taihu, China: Pearl	Sample	^{7}Li	^{11}B	^{23}Na	^{24}Mg	^{27}Al	^{31}P	^{39}K	^{45}Sc	^{47}Ti	^{55}Mn	^{57}Fe	^{59}Co	^{60}Ni	^{63}Cu	^{66}Zn	^{69}Ga	^{88}Sr	^{137}Ba
Pink	CN-FW-P1	bdl	14.71	7050	131.1	bdl	433	41.481	bdl	bdl	1693	1137	0.563	1.89	1.037	3.87	11.9	1108	768
Cream	CN-FW-P2	0.27	11.88	6381	150.3	bdl	472	39.228	bdl	bdl	2390	1098	0.519	1.98	1.594	1.71	4.24	802	271.2
Light yellow	CN-FW-P3	bdl	13.6	6757	72.75	bdl	346	109.53	bdl	bdl	1144	1132	0.477	1.9	0.418	1.36	6.25	1042	365.6
Pink	CN-FW-P4	bdl	12.58	6379	63.22	bdl	397	30.397	bdl	bdl	1316	1019	0.456	1.71	1.617	4.71	3.86	812	216.8
Cream	CN-FW-P5	bdl	10.8	5765	122.3	bdl	442	41.533	bdl	bdl	2034	997	0.426	1.59	0.864	0.98	3.17	806	217.1
Light yellow	CN-FW-P6	0.05	10.89	5758	148.7	bdl	419	81.917	bdl	bdl	2386	1034	0.474	1.82	1.639	1.36	5.51	967	299.3
Purple	CN-FW-P7	bdl	16.76	6523	60.73	bdl	601	61.337	bdl	bdl	1250	1197	0.554	2.28	1.416	0.61	5.97	795	332.4
Cream	CN-FW-P8	bdl	13.81	5978	122.8	bdl	583	39.319	bdl	bdl	2889	1054	0.45	1.66	0.563	3.93	13.1	1151	819.1
Light yellow	CN-FW-P9	bdl	13.52	6992	143.5	bdl	387	55.757	bdl	bdl	4333	1107	0.408	1.68	0.652	5.63	36.1	1318	2314
Purplish pink	CN-FW-P10	0.21	12.49	8411	111	bdl	453	85.281	bdl	bdl	393.7	1187	0.441	1.73	0.87	5.42	5.45	767	307.5
Cream	CN-FW-P11	bdl	15.94	7359	236.9	bdl	588	102.86	bdl	bdl	2653	1167	0.513	2.07	1.288	3.76	13.1	1112	777
Light yellow	CN-FW-P12	bdl	12.06	5943	108.9	bdl	405	130.33	bdl	bdl	2959	979	0.381	1.76	1.566	bdl	9.72	1025	630.6
Purple	CN-FW-P13	bdl	10.45	6528	96.14	bdl	439	48.445	bdl	bdl	2063	908	0.396	1.57	0.814	3.22	18.5	883	1094
Cream	CN-FW-P14	bdl	12.26	6930	131.4	bdl	457	76.369	bdl	bdl	2136	1102	0.456	1.64	0.602	1.67	11.7	1104	735.9
Orange	CN-FW-P15	bdl	11.24	6335	116.5	bdl	391	29.85	bdl	bdl	2388	956	0.379	1.84	1.12	0.21	8.18	1001	552.9
Lake Taihu, China: Shell	Sample	^{7}Li	^{11}B	^{23}Na	^{24}Mg	^{27}Al	^{31}P	^{39}K	^{45}Sc	^{47}Ti	^{55}Mn	^{57}Fe	^{59}Co	^{60}Ni	^{63}Cu	^{66}Zn	^{69}Ga	^{88}Sr	^{137}Ba
China-SHELL-001 Cut surface position	Outer part of shell, spot 1 (prismatic)	bdl	12.64	8841	116.8	10.31	198	159.33	bdl	bdl	2731	612	0.394	4.81	5.613	10.7	6.73	862	459.7
	Spot 2	0.11	4.768	8203	35.81	29.72	195	57.733	bdl	bdl	1029	572	0.171	1.08	1.588	3.34	4.89	514	274.9
	Spot 3	0.1	4.543	7499	17.38	bdl	122	55.342	bdl	bdl	588.4	479	0.191	1.16	0.993	6.32	2.06	463	115.6
	Spot 4	bdl	5.235	5815	26.38	bdl	144	67.59	bdl	bdl	814	744	0.144	0.76	0.774	3.58	2.03	745	135
	Spot 5	bdl	2.767	5354	38.84	bdl	165	96.771	bdl	bdl	5291	315	0.104	0.73	0.726	0.21	3.23	837	225.5
	Inner part of shell, spot 6	0.08	3.87	7186	20.57	bdl	112	77.982	bdl	bdl	2190	432	0.13	0.83	0.46	bdl	2.79	711	150.7
Detection limits		0.05	1.95	9.73	0.46	4.03	32	3.24	0.1	3.15	0.33	27.8	0.1	0.52	0.29	0.2	0.1	0.36	0.1

bdl=below detection limit