Supplementary Materials: Chemical Characteristics of Freshwater and Saltwater Natural and Cultured Pearls from Different Bivalves

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Table S1. LA-ICP-MS analysis in ppmw of the studied natural pearls samples from *P. radiata* (Heirats, Bahrain).

Samples	^{23}Na	^{24}Mg	^{55}Mn	^{88}Sr	^{137}Ba	^{208}Pb
XR-2021 SP1	5550	289	0.78	980	0.16	0.08
XR-2022 SP1	5350	81.9	BQL	905	0.95	0.68
XR-2023 SP1	5200	258	BQL	930	0.42	BQL
XR-2024 SP1	5100	181	1.36	1340	1.03	0.35
XR-2025 SP1	7170	229	5.23	654	0.98	0.069
XR-2026 SP1	5590	125	0.92	781	0.55	0.043
XR-2027 SP1	6760	136	BQL	912	0.28	0.19
XR-2028 SP1	6600	136	BQL	1290	1.09	0.11
XR-2029 SP1	5860	246	3.04	961	0.37	0.22
XR-2030 SP1	5680	89	BQL	830	0.27	BQL
XR-2031 SP1	5960	64.5	0.73	864	0.66	BQL
XR-2032 SP1	6140	295	1.55	903	0.47	0.16
XR-2033 SP1	5540	134	BQL	941	0.47	BQL
XR-2034 SP1	5700	40.8	0.7	698	0.25	BQL
XR-2035 SP1	6440	258	0.58	1250	0.39	0.45
XR-2036 SP1	6750	76.4	0.57	943	1.01	0.048
XR-2037 SP1	5790	101	0.75	1050	0.52	0.68
XR-2038 SP1	5550	32.3	BQL	780	0.42	0.11
XR-2039 SP1	5720	241	1.84	1360	1.36	0.33
XR-2040 SP1	5720	118	BQL	994	0.34	BQL
XR-2041 SP1	4890	157	BQL	1310	1.17	0.05
XR-2042 SP1	4940	209	BQL	1390	1.55	0.072
XR-2043 SP1	5590	191	BQL	1150	0.66	0.059
XR-2044 SP1	5590	50.9	BQL	807	0.58	0.035
XR-2045 SP1	5550	100	BQL	1010	0.54	0.28
XR-2046 SP1	5570	204	6.59	1130	0.43	0.065
XR-2047 SP1	5210	126	BQL	913	0.62	0.076
XR-2048 SP1	7130	109	1.05	799	0.59	0.051
XR-2049 SP1	5670	39.5	BQL	698	0.54	0.14
XR-2050 SP1	5590	56.7	1.36	928	0.46	0.042
XR-2051 SP1	5870	241	0.85	1190	0.42	0.05
XR-2052 SP1	5890	105	0.7	1060	0.7	0.062
XR-2053 SP1	5430	147	BQL	1140	0.45	0.4

XR-2054 SP1	4350	187	BQL	1290	1.95	0.053
XR-2055 SP1	5260	156	2.56	1030	0.23	0.27
RS-2057 SP1	4780	65.4	0.51	768	0.32	0.16
RS-2058 SP1	4830	222	BQL	742	0.38	BQL
XR-2059 SP1	6090	46.9	BQL	692	0.31	0.02
XR-2060 SP1	4720	96.7	BQL	730	0.2	BQL
XR-2061 SP1	4750	157	0.85	828	0.43	0.029
XR-2062 SP1	5560	39.6	BQL	749	0.65	0.11
XR-2063 SP1	4910	38.8	BQL	518	0.17	0.044
XR-2064 SP1	4800	97.9	BQL	642	0.26	0.14
XR-2065 SP1	4120	312	BQL	748	0.34	0.048
XR-2066 SP1	4800	54.2	1.48	722	0.18	0.041
XR-2067 SP1	5640	164	BQL	1120	0.91	0.53
XR-2068 SP1	5660	50.6	BQL	824	BQL	0.2
XR-2069 SP1	6480	99.6	1.2	816	0.61	0.058
XR-2070 SP1	4980	143	BQL	947	0.58	0.058
XR-2071 SP1	4800	317	1.02	1190	0.56	0.067
XR-2072 SP1	5630	49.1	BQL	800	BQL	0.31
XR-2073 SP1	5850	53.4	BQL	865	BQL	0.055
XR-2075 SP1	5810	295	4.73	1010	1.26	0.14
XR-2076 SP1	5640	212	2.49	1090	0.46	0.11
XR-2077 SP1	5120	269	BQL	1650	1.13	0.072
XR-2078 SP1	6190	90.2	BQL	1040	0.34	0.095
XR-2079 SP1	5160	358	BQL	1400	1.4	0.2
XR-2080 SP1	6520	101	BQL	845	0.94	BQL
XR-2081 SP1	6200	61.1	BQL	842	0.51	0.079
XR-2082 SP1	6020	96.2	BQL	1080	1.7	0.082
XR-2083 SP1	6130	73.6	BQL	761	0.24	0.33
XR-2085 SP1	6920	46.7	BQL	997	0.59	0.099
XR-2086 SP1	5170	85.9	BQL	1050	0.92	BQL
XR-2087 SP1	5980	227	3.53	928	0.96	0.078
XR-2088 SP1	6000	150	BQL	828	0.36	1.91
XR-2089 SP1	6060	48.4	6.06	781	0.24	0.087
XR-2090 SP1	6720	70.6	BQL	847	0.47	0.24
XR-2091 SP1	6240	102	BQL	913	0.28	BQL
XR-2092 SP1	6390	53.7	BQL	895	0.72	0.14
XR-2093 SP1	5910	145	BQL	946	0.26	BQL
XR-2094 SP1	6170	181	BQL	1090	1.06	0.084
XR-2095 SP1	5420	266	4.39	1160	0.99	0.11
XR-2096 SP1	6330	109	BQL	930	0.27	BQL
XR-2097 SP1	7270	56.2	BQL	845	0.66	0.14
XR-2098 SP1	5720	200	3.66	1520	1.69	0.066
XR-2099 SP1	6370	98.6	BQL	718	0.78	BQL
XR-2100 SP1	5570	219	BQL	1140	0.54	BQL

XR-3169 SP1	6270	54.4	BQL	848	0.92	0.17
XR-3170 SP1	6010	70.1	7.62	894	1.2	0.073
XR-3172 SP1	5170	190	BQL	1370	1.71	0.047
XR-3173 SP1	6130	62.7	BQL	821	0.25	0.072
XR-3174 SP1	6030	138	1.62	929	0.43	0.14
XR-3175 SP1	6760	47.8	BQL	742	0.24	0.098
XR-3176 SP1	5490	176	1.12	1080	0.47	0.06
XR-3177 SP1	5470	267	BQL	1340	3.56	0.18
XR-3178 SP1	6730	41.4	BQL	842	1.66	0.12
XR-3179 SP1	5610	90.2	BQL	886	1.27	0.13
XR-3180 SP1	5520	112	BQL	1110	0.77	0.039
XR-3181 SP1	5790	217	1.26	1040	2.1	0.083
XR-3182 SP1	5920	117	BQL	1010	0.55	BQL
XR-3183 SP1	5680	108	0.94	905	0.56	0.44
XR-3184 SP1	6610	65.6	BQL	912	1.19	0.052
XR-3185 SP1	6460	166	4	1170	1.81	0.028
XR-3187 SP1	5030	277	3.49	872	0.97	0.11
XR-3188 SP1	4500	158	5.5	1200	0.66	0.16
XR-3189 SP1	5650	47.6	0.7	607	0.47	1.96
XR-3190 SP1	5110	160	2.77	824	0.74	0.11
XR-3191 SP1	5570	29.5	4.83	639	2.15	0.79
XR-3192 SP1	5980	90.3	BQL	613	0.47	0.027
XR-3193 SP1	6710	31.2	1.58	689	0.42	0.071
XR-3194 SP1	5230	125	BQL	719	0.71	0.071
XR-3195 SP1	5670	79.5	2.38	610	0.52	1.96
XR-3196 SP1	5750	400	2.06	727	1.12	2.87
XR-3197 SP1	5560	213	0.77	851	1.7	0.11
XR-3198 SP1	5600	123	BQL	625	0.7	0.025
XR-3199 SP1	5530	53.8	0.66	662	0.25	0.03
XR-3253 SP1	5600	192	1.21	904	0.82	0.085
XR-3254 SP1	5070	74.4	BQL	879	0.72	0.082
XR-3255 SP1	5200	197	1.28	1210	1.73	0.1
XR-3257 SP1	4720	345	BQL	1230	1.04	0.07
XR-3258 SP1	5230	200	BQL	965	0.48	BQL
XR-3259 SP1	5310	135	BQL	938	0.58	0.11
XR-3260 SP1	5090	222	BQL	1330	1.75	BQL
XR-3261 SP1	5380	161	BQL	1080	1.04	0.093
XR-3262 SP1	5410	80.7	BQL	898	1.08	BQL
XR-3263 SP1	5440	231	1.07	999	0.58	0.096
XR-3264 SP1	4970	268	3.86	1080	0.46	0.062
XR-3265 SP1	5330	70.8	BQL	731	0.63	0.057
XR-3266 SP1	5850	164	3.78	992	0.43	0.18
XR-3267 SP1	5150	150	3.47	1190	0.36	0.066
XR-3268 SP1	5230	90.8	BQL	795	0.55	BQL

XR-3270 SP1	4890	171	BQL	943	0.63	0.087
XR-3271 SP1	5410	58.9	BQL	828	0.44	0.063
XR-3272 SP1	5010	234	4.15	1140	2.65	0.089
XR-3273 SP1	3410	174	1.36	1100	1.43	0.17
XR-3274 SP1	4130	66.9	1.15	768	0.44	BQL
XR-3275 SP1	4290	90.5	1.28	912	1.11	0.13
XR-3276 SP1	3550	48.1	BQL	826	0.64	0.12
XR-3277 SP1	3720	141	0.72	1030	0.56	0.31
XR-3278 SP1	4200	83.5	0.97	1190	0.73	0.18
XR-3280 SP1	4670	250	2.71	1250	0.77	0.2
XR-3281 SP1	4300	335	0.98	1640	4.32	0.26
XR-3282 SP1	3490	181	1.39	865	0.81	0.091
XR-3283 SP1	7270	91.5	BQL	993	0.99	0.056
XR-3284 SP1	3690	184	BQL	1200	1.95	0.13
XR-3285 SP1	5290	65	BQL	871	0.52	0.4
XR-3286 SP1	4250	77.6	1.17	776	0.49	0.096
XR-3287 SP1	4020	39.7	0.63	732	0.69	0.43
XR-3288 SP1	3340	284	0.92	1160	1.05	0.16
XR-3289 SP1	4130	92.4	BQL	920	0.38	0.061
XR-3290 SP1	3830	150	BQL	1190	0.99	0.054
XR-3292 SP1	3640	383	1.45	1260	0.67	0.063
XR-3293 SP1	3840	123	0.92	900	0.44	0.044
XR-3294 SP1	4630	292	BQL	1150	1.1	0.11
XR-3295 SP1	4120	135	BQL	926	0.86	0.17
XR-3296 SP1	3640	108	0.79	788	0.58	0.2
XR-3297 SP1	5800	177	BQL	851	1.14	0.049
XR-3298 SP1	6290	136	1.09	855	0.29	0.079
XR-3299 SP1	5720	177	0.7	1130	1.08	0.057
XR-3300 SP1	6120	86.5	BQL	858	0.99	0.046
XR-3301 SP1	5860	49.7	BQL	798	0.31	BQL
XR-3302 SP1	5370	121	BQL	1060	1.86	0.19
XR-3303 SP1	5700	37.7	BQL	826	0.48	0.078
XR-3304 SP1	5550	219	1.42	996	1.47	0.19
XR-3305 SP1	6060	83.9	BQL	843	0.53	0.11
XR-3306 SP1	6780	92.5	BQL	983	1.01	0.12
XR-3307 SP1	6470	128	BQL	1140	0.88	0.068
XR-3308 SP1	5240	105	0.51	837	0.35	0.06
XR-3309 SP1	4860	469	1.88	1110	0.89	0.4
XR-3310 SP1	4630	86.9	BQL	813	0.41	0.031
XR-3311 SP1	4490	191	BQL	872	0.93	0.28
XR-3312 SP1	5220	142	1.02	699	0.44	0.18
XR-3313 SP1	5350	44.7	BQL	702	0.28	0.11
XR-3314 SP1	4990	120	BQL	850	0.37	0.057
XR-3315 SP1	4430	252	BQL	1010	0.48	0.1

XR-3316 SP1	4640	175	0.81	714	0.63	0.034
XR-3317 SP1	4470	136	BQL	1190	0.68	0.027
XR-3318 SP1	4880	65.1	0.51	689	0.61	0.087
XR-3319 SP1	6320	48	BQL	854	0.25	1.19
XR-3320 SP1	5580	175	1.26	1160	1.59	0.13
XR-3321 SP1	5590	88.6	BQL	1080	0.49	0.083
XR-3322 SP1	5940	135	BQL	945	0.5	0.086
XR-3323 SP1	5410	103	BQL	995	0.78	0.14
XR-3324 SP1	5520	113	BQL	1320	1.06	BQL
XR-3325 SP1	5120	107	BQL	1280	0.4	BQL
XR-3326 SP1	6060	99.1	BQL	969	0.44	0.083
XR-3327 SP1	5010	182	BQL	979	0.4	0.085
XR-3328 SP1	4690	97.1	BQL	841	0.12	BQL
XR-3329 SP1	5330	101	BQL	846	0.4	BQL
XR-3330 SP1	6390	83.5	BQL	962	0.34	0.16
XR-3331 SP1	5660	383	1.26	1350	0.62	BQL
XR-3333 SP1	5810	74.6	BQL	908	1.33	BQL
XR-3334 SP1	4730	216	BQL	1460	2.33	0.11
XR-3335 SP1	5620	477	3.08	850	0.94	0.75
XR-3336 SP1	5180	154	BQL	1240	1.14	0.095
XR-3337 SP1	5720	55.3	BQL	702	0.22	0.09
XR-3338 SP1	4910	138	BQL	1020	0.33	BQL
XR-3339 SP1	4590	269	0.77	1540	1.78	0.094
XR-3340 SP1	3990	159	BQL	1310	1.5	0.069
XR-3341 SP1	4490	168	1.93	1050	0.65	0.17
XR-3342 SP1	4430	116	BQL	1180	0.68	0.22
XR-3343 SP1	4700	318	BQL	1550	1.81	0.36
XR-3344 SP1	4210	80.5	BQL	768	0.62	0.059
XR-3345 SP1	6350	225	BQL	1240	2.03	0.1
XR-3346 SP1	4850	173	0.54	744	0.25	0.12
XR-3347 SP1	4840	52.5	BQL	892	0.33	0.092
XR-3348 SP1	4440	235	0.81	1330	3.26	0.15
XR-3349 SP1	4450	174	BQL	804	0.43	0.076
XR-3350 SP1	4250	269	0.48	1250	1.47	0.13
XR-3352 SP1	4660	124	BQL	657	0.55	0.27
XR-3353 SP1	4800	353	4.03	730	0.34	0.12
XR-3354 SP1	4340	318	1.48	832	0.38	0.61
XR-3355 SP1	4760	330	1.24	985	1.01	0.043
XR-3356 SP1	4920	41.8	BQL	588	0.7	0.025
XR-3357 SP1	5300	33.2	BQL	593	1.96	0.055
XR-3358 SP1	4760	181	BQL	716	0.55	0.024
XR-3359 SP1	4890	38.5	0.47	588	0.3	0.054
XR-3360 SP1	3930	144	BQL	1110	0.83	0.027
XR-3379 SP1	4150	154	BQL	1260	0.45	BQL

XR-3380 SP1	5130	43.1	0.33	680	0.95	BQL
XR-3382 SP1	4050	221	0.65	903	2.51	BQL
XR-3383 SP1	3820	258	0.3	1240	0.7	BQL
XR-3384 SP1	4990	188	0.54	846	0.54	BQL
XR-3385 SP1	4860	94.6	BQL	694	0.3	3.91
XR-3386 SP1	4160	204	0.28	1360	1.08	BQL
XR-3387 SP1	4260	121	BQL	803	0.3	BQL
XR-3388 SP1	5220	147	0.32	679	0.36	BQL
XR-3389 SP1	5570	29.8	0.34	710	0.26	BQL
XR-3390 SP1	4230	115	BQL	795	0.36	BQL
XR-3391 SP1	4850	239	1.61	869	1.29	BQL
XR-3392 SP1	4610	93.2	0.66	689	0.18	BQL
XR-3393 SP1	4960	74.8	BQL	659	0.17	BQL
XR-3394 SP1	4740	130	0.41	957	0.4	BQL
XR-3395 SP1	4820	60.7	BQL	696	0.28	BQL
XR-3396 SP1	4390	109	BQL	685	0.27	BQL
XR-3397 SP1	4890	37.6	BQL	696	0.12	BQL
XR-3398 SP1	4460	75.6	BQL	743	0.2	BQL
XR-3400 SP1	5100	183	6.72	1120	2.37	1.31
XR-3401 SP1	4310	207	0.99	1150	1.79	1.15
XR-3402 SP1	4920	277	1.06	865	1.09	0.31
XR-3403 SP1	4040	393	4.96	870	0.65	0.076
XR-3404 SP1	5250	264	4	758	0.37	0.058
XR-3405 SP1	4830	57.8	BQL	704	0.3	0.036
XR-3406 SP1	5400	153	0.57	648	0.39	0.11
XR-3407 SP1	3940	231	0.49	1110	1.37	0.031
XR-3408 SP1	4770	91.7	BQL	901	0.65	0.07
XR-3409 SP1	4460	132	0.43	818	0.52	0.06
XR-3410 SP1	5670	49.8	1.21	748	0.49	0.088
XR-3411 SP1	4210	185	0.68	755	0.56	0.084
XR-3412 SP1	4090	62.9	BQL	564	0.72	0.035
XR-3413 SP1	5250	142	0.5	887	0.67	0.04
XR-3414 SP1	4820	126	1.02	823	0.22	0.12
XR-3415 SP1	4690	133	1.82	872	0.48	0.12
XR-3416 SP1	5490	111	0.53	711	0.39	0.051
XR-3418 SP1	4390	205	1.45	869	1.35	0.048
XR-3419 SP1	4150	148	BQL	1030	1.06	0.027
XR-3420 SP1	4470	101	0.41	739	0.34	0.044
XR-3421 SP1	4600	205	0.5	804	0.36	0.052

Table S2. LA-ICP-MS analysis in ppmw of the studied natural pearls samples from *P. margaritifera* (Red Sea, Egypt).

Samples	^{23}Na	^{24}Mg	^{55}Mn	^{88}Sr	^{137}Ba	^{208}Pb
XR-1608 SP1	5510	474	1.57	728	0.18	0.13
XR-1609 SP3	6460	566	3.31	900	0.4	0.37
XR-1609 SP2	4300	487	4.69	1130	2.02	1.18
XR-1609 SP3	2980	449	3.44	998	BQL	0.79
XR-1610 SP1	5880	335	2.57	1260	0.46	0.3
XR-1611 SP1	5280	483	2.12	980	0.33	0.18
XR-1612 SP1	4550	341	2.74	904	0.23	0.31
XR-1613 SP1	4570	252	2.05	835	0.26	0.055
XR-1614 SP1	5440	420	3.23	1100	0.34	0.41
XR-1614 SP2	6140	454	4.2	1290	0.24	0.31
XR-1614 SP3	5610	440	5.5	1240	0.71	0.15
XR-1615 SP1	6020	239	1.38	894	0.2	0.13
XR-1616 SP1	7240	69.2	2.35	1090	0.22	0.18
XR-1616 SP2	6800	67.6	2.34	1120	0.2	0.13
XR-1616 SP3	7220	71.4	2.01	1320	0.19	0.2
XR-1617 SP1	5020	249	3.44	686	0.17	0.047
XR-1618 SP1	5270	406	1.98	1040	0.37	0.75
XR-1619 SP1	3370	543	3.24	1130	BQL	0.079
XR-1619 SP2	4240	553	3.07	1380	BQL	0.42
XR-1619 SP3	3580	557	2.51	1110	BQL	0.39
XR-1620 SP1	4920	279	2.56	1150	0.36	0.12
XR-1621 SP1	4610	200	BQL	1260	0.48	0.32
XR-1622 SP1	4640	427	2.51	1250	0.28	0.17
XR-1623 SP1	4580	365	3.12	1340	0.31	0.15
XR-1624 SP1	4930	344	2.69	880	0.32	BQL
XR-1625 SP1	4490	295	BQL	1510	0.37	0.56
XR-1626 SP1	4690	303	BQL	1330	0.29	0.11
XR-1627 SP1	4710	367	1.96	1190	0.26	BQL
XR-1628 SP1	5180	388	3.2	1010	0.17	0.18
XR-1629 SP1	5150	350	3.54	1050	0.27	BQL
XR-1630 SP1	5460	456	2.55	988	0.22	0.17
XR-1631 SP1	4940	393	2.09	1230	0.5	0.19
XR-1631 SP2	5300	423	2.4	1060	0.55	0.065
XR-1631 SP3	5370	636	1.96	1010	0.35	0.046
XR-1632 SP1	3140	538	2.92	1250	BQL	0.21
XR-1632 SP2	2700	595	2.81	1560	BQL	1.74
XR-1632 SP3	2990	521	2.65	1550	BQL	0.69
XR-1633 SP1	6050	396	3.42	1120	0.56	0.58
XR-1634 SP1	3150	390	3.07	983	BQL	0.052
XR-1634 SP2	3040	388	2.51	879	BQL	0.062
XR-1634 SP3	3490	345	3.06	972	BQL	0.45

XR-1635 SP1	2950	367	2.01	1030	0.51	0.41
XR-1635 SP2	2960	387	1.59	1060	0.35	0.43
XR-1635 SP3	2870	319	1.67	981	0.32	0.24
XR-1636 SP1	6830	290	1.6	854	0.44	0.11
XR-1637 SP1	3600	250	BQL	927	BQL	0.081
XR-1637 SP2	3560	300	BQL	924	BQL	0.15
XR-1637 SP3	3150	262	BQL	1080	BQL	0.056
XR-1638 SP1	3110	439	3.89	1010	BQL	BQL
XR-1638 SP2	3020	403	2.84	1130	BQL	0.036
XR-1638 SP3	3140	417	2.96	1050	BQL	0.19
XR-1640 SP1	3380	348	3.13	996	BQL	0.14
XR-1640 SP2	3290	359	2.69	921	BQL	0.16
XR-1640 SP3	3170	327	2.61	1050	BQL	0.72
XR-1641 SP1	6170	366	2.32	842	0.37	0.15
XR-1642 SP1	6370	374	1.59	980	0.33	0.21
XR-1643 SP1	3740	336	2.23	1030	BQL	1.56
XR-1643 SP2	3020	318	1.65	1040	BQL	1.31
XR-1643 SP3	3230	358	2.21	1160	BQL	0.9
XR-1644 SP1	6740	376	3.25	759	0.27	BQL
XR-1645 SP1	5700	362	2.62	959	0.43	0.33
XR-1646 SP1	5710	331	2.71	1220	0.49	0.11
XR-1647 SP1	6260	342	3.71	1050	0.32	0.19
XR-1648 SP1	5940	365	2.57	1180	0.35	0.1
XR-1649 SP1	5690	418	1.49	1170	0.37	0.44
XR-1650 SP1	6060	281	1.61	1090	0.53	0.12
XR-1651 SP1	3260	600	2.64	948	0.49	0.37
XR-1651 SP2	3490	560	4.6	898	0.28	0.12
XR-1651 SP3	3520	675	3.98	872	0.32	0.046
XR-1652 SP1	5030	249	BQL	1230	0.35	0.11
XR-1653 SP1	6000	397	1.26	1170	0.43	0.18
XR-1654 SP1	5420	293	2.76	1250	0.29	0.059
XR-1655 SP1	6260	419	3.22	977	0.43	0.059
XR-1656 SP1	4960	150	2.07	914	0.44	0.041
XR-1657 SP1	4710	291	1.4	1090	0.35	0.27
XR-1658 SP1	4750	186	2.16	973	0.31	0.048
XR-1659 SP1	4750	283	2.92	908	0.31	1.52
XR-1660 SP1	5270	341	1.89	1010	0.34	0.35
XR-1661 SP1	3060	311	1.12	693	0.13	0.07
XR-1661 SP2	2870	290	0.88	663	0.15	0.086
XR-1661 SP3	3200	369	0.66	712	0.23	0.41
XR-1662 SP1	5550	481	1.98	1250	0.45	0.46
XR-1663 SP1	5070	408	1.13	1220	0.47	0.57
XR-1664 SP1	5010	358	2.3	1400	0.47	BQL
XR-1665 SP1	4560	443	2.47	1030	0.46	0.22

XR-1666 SP1	4470	348	2.24	1190	0.43	0.044
XR-1667 SP1	3450	376	1.72	883	BQL	0.056
XR-1667 SP2	3080	370	1.77	900	BQL	0.031
XR-1667 SP3	3440	377	1.94	843	BQL	0.19
XR-1668 SP1	5190	453	1.75	1200	0.64	0.066
XR-1669 SP1	5440	228	2.85	1120	0.43	0.071
XR-1670 SP1	4620	397	2.08	1080	0.37	0.037
XR-1672 SP1	4680	391	1.71	1110	0.64	0.069
XR-1673 SP1	5030	457	0.64	1310	0.61	1.09
XR-1674 SP1	5320	361	1.84	1180	0.34	0.17
XR-1675 SP1	5010	441	2.94	1250	0.66	0.052
XR-1676 SP1	4400	278	2.25	1500	0.56	0.056
XR-1677 SP1	4820	365	2.27	1010	0.38	0.048
XR-1678 SP1	3060	194	1.31	804	0.15	0.18
XR-1678 SP2	2900	219	0.89	930	0.087	0.11
XR-1678 SP3	2630	208	0.53	759	0.19	0.17
XR-1679 SP1	3030	416	1.7	1130	BQL	0.66
XR-1679 SP2	2640	350	1.55	1040	BQL	0.27
XR-1679 SP3	2790	378	1.55	1170	BQL	0.22
XR-1680 SP1	4850	306	2.82	816	0.23	0.046
XR-1681 SP1	6010	275	2.7	933	0.56	0.35
XR-1682 SP1	5140	430	1.47	1290	0.5	0.34
XR-1683 SP1	3470	430	2.86	975	BQL	0.088
XR-1683 SP2	3340	471	3.12	912	BQL	0.057
XR-1683 SP3	3320	449	2.83	911	BQL	0.22
XR-1684 SP1	3480	419	1.81	919	BQL	1.29
XR-1684 SP2	3370	410	2.02	948	BQL	0.17
XR-1684 SP3	3440	439	2.33	869	BQL	1.51
XR-1685 SP1	3270	297	1.11	967	BQL	0.56
XR-1685 SP2	3340	308	1.46	925	BQL	0.71
XR-1685 SP3	3200	283	1.03	951	BQL	0.78
XR-1686 SP1	4480	287	2.31	954	0.41	0.19
XR-1687 SP1	5300	318	2.78	1010	0.46	0.51
XR-1688 SP1	3240	216	1.88	1000	BQL	0.073
XR-1688 SP2	3300	188	2.69	951	BQL	0.12
XR-1688 SP3	3230	164	2.5	975	BQL	0.091
XR-1689 SP1	4740	300	2.6	1290	0.51	0.037
XR-1608 SP1	5510	474	1.57	728	0.18	0.13
XR-1609 SP3	6460	566	3.31	900	0.4	0.37
XR-1609 SP2	4300	487	4.69	1130	2.02	1.18
XR-1609 SP3	2980	449	3.44	998	BQL	0.79
XR-1610 SP1	5880	335	2.57	1260	0.46	0.3
XR-1611 SP1	5280	483	2.12	980	0.33	0.18
XR-1612 SP1	4550	341	2.74	904	0.23	0.31

XR-1613 SP1	4570	252	2.05	835	0.26	0.055
XR-1614 SP1	5440	420	3.23	1100	0.34	0.41
XR-1614 SP2	6140	454	4.2	1290	0.24	0.31
XR-1614 SP3	5610	440	5.5	1240	0.71	0.15
XR-1615 SP1	6020	239	1.38	894	0.2	0.13
XR-1616 SP1	7240	69.2	2.35	1090	0.22	0.18
XR-1616 SP2	6800	67.6	2.34	1120	0.2	0.13
XR-1616 SP3	7220	71.4	2.01	1320	0.19	0.2
XR-1617 SP1	5020	249	3.44	686	0.17	0.047
XR-1618 SP1	5270	406	1.98	1040	0.37	0.75
XR-1619 SP1	3370	543	3.24	1130	BQL	0.079
XR-1619 SP2	4240	553	3.07	1380	BQL	0.42
XR-1619 SP3	3580	557	2.51	1110	BQL	0.39
XR-1620 SP1	4920	279	2.56	1150	0.36	0.12
XR-1621 SP1	4610	200	BQL	1260	0.48	0.32
XR-1622 SP1	4640	427	2.51	1250	0.28	0.17
XR-1623 SP1	4580	365	3.12	1340	0.31	0.15
XR-1624 SP1	4930	344	2.69	880	0.32	BQL
XR-1625 SP1	4490	295	BQL	1510	0.37	0.56
XR-1626 SP1	4690	303	BQL	1330	0.29	0.11
XR-1627 SP1	4710	367	1.96	1190	0.26	BQL
XR-1628 SP1	5180	388	3.2	1010	0.17	0.18
XR-1629 SP1	5150	350	3.54	1050	0.27	BQL
XR-1630 SP1	5460	456	2.55	988	0.22	0.17
XR-1631 SP1	4940	393	2.09	1230	0.5	0.19
XR-1631 SP2	5300	423	2.4	1060	0.55	0.065
XR-1631 SP3	5370	636	1.96	1010	0.35	0.046
XR-1632 SP1	3140	538	2.92	1250	BQL	0.21
XR-1632 SP2	2700	595	2.81	1560	BQL	1.74
XR-1632 SP3	2990	521	2.65	1550	BQL	0.69
XR-1633 SP1	6050	396	3.42	1120	0.56	0.58
XR-1634 SP1	3150	390	3.07	983	BQL	0.052
XR-1634 SP2	3040	388	2.51	879	BQL	0.062
XR-1634 SP3	3490	345	3.06	972	BQL	0.45
XR-1635 SP1	2950	367	2.01	1030	0.51	0.41
XR-1635 SP2	2960	387	1.59	1060	0.35	0.43
XR-1635 SP3	2870	319	1.67	981	0.32	0.24
XR-1636 SP1	6830	290	1.6	854	0.44	0.11
XR-1637 SP1	3600	250	BQL	927	BQL	0.081
XR-1637 SP2	3560	300	BQL	924	BQL	0.15
XR-1637 SP3	3150	262	BQL	1080	BQL	0.056
XR-1638 SP1	3110	439	3.89	1010	BQL	BQL
XR-1638 SP2	3020	403	2.84	1130	BQL	0.036
XR-1638 SP3	3140	417	2.96	1050	BQL	0.19

XR-1640 SP1	3380	348	3.13	996	BQL	0.14
XR-1640 SP2	3290	359	2.69	921	BQL	0.16
XR-1640 SP3	3170	327	2.61	1050	BQL	0.72
XR-1641 SP1	6170	366	2.32	842	0.37	0.15
XR-1642 SP1	6370	374	1.59	980	0.33	0.21
XR-1643 SP1	3740	336	2.23	1030	BQL	1.56
XR-1643 SP2	3020	318	1.65	1040	BQL	1.31
XR-1643 SP3	3230	358	2.21	1160	BQL	0.9
XR-1644 SP1	6740	376	3.25	759	0.27	BQL
XR-1645 SP1	5700	362	2.62	959	0.43	0.33
XR-1646 SP1	5710	331	2.71	1220	0.49	0.11
XR-1647 SP1	6260	342	3.71	1050	0.32	0.19
XR-1648 SP1	5940	365	2.57	1180	0.35	0.1
XR-1649 SP1	5690	418	1.49	1170	0.37	0.44
XR-1650 SP1	6060	281	1.61	1090	0.53	0.12
XR-1651 SP1	3260	600	2.64	948	0.49	0.37
XR-1651 SP2	3490	560	4.6	898	0.28	0.12
XR-1651 SP3	3520	675	3.98	872	0.32	0.046
XR-1652 SP1	5030	249	BQL	1230	0.35	0.11
XR-1653 SP1	6000	397	1.26	1170	0.43	0.18
XR-1654 SP1	5420	293	2.76	1250	0.29	0.059
XR-1655 SP1	6260	419	3.22	977	0.43	0.059
XR-1656 SP1	4960	150	2.07	914	0.44	0.041
XR-1657 SP1	4710	291	1.4	1090	0.35	0.27
XR-1658 SP1	4750	186	2.16	973	0.31	0.048
XR-1659 SP1	4750	283	2.92	908	0.31	1.52
XR-1660 SP1	5270	341	1.89	1010	0.34	0.35
XR-1661 SP1	3060	311	1.12	693	0.13	0.07
XR-1661 SP2	2870	290	0.88	663	0.15	0.086
XR-1661 SP3	3200	369	0.66	712	0.23	0.41
XR-1662 SP1	5550	481	1.98	1250	0.45	0.46
XR-1663 SP1	5070	408	1.13	1220	0.47	0.57
XR-1664 SP1	5010	358	2.3	1400	0.47	BQL
XR-1665 SP1	4560	443	2.47	1030	0.46	0.22
XR-1666 SP1	4470	348	2.24	1190	0.43	0.044
XR-1667 SP1	3450	376	1.72	883	BQL	0.056
XR-1667 SP2	3080	370	1.77	900	BQL	0.031
XR-1667 SP3	3440	377	1.94	843	BQL	0.19
XR-1668 SP1	5190	453	1.75	1200	0.64	0.066
XR-1669 SP1	5440	228	2.85	1120	0.43	0.071
XR-1670 SP1	4620	397	2.08	1080	0.37	0.037
XR-1672 SP1	4680	391	1.71	1110	0.64	0.069
XR-1673 SP1	5030	457	0.64	1310	0.61	1.09
XR-1674 SP1	5320	361	1.84	1180	0.34	0.17

XR-1675 SP1	5010	441	2.94	1250	0.66	0.052
XR-1676 SP1	4400	278	2.25	1500	0.56	0.056
XR-1677 SP1	4820	365	2.27	1010	0.38	0.048
XR-1678 SP1	3060	194	1.31	804	0.15	0.18
XR-1678 SP2	2900	219	0.89	930	0.087	0.11
XR-1678 SP3	2630	208	0.53	759	0.19	0.17
XR-1679 SP1	3030	416	1.7	1130	BQL	0.66
XR-1679 SP2	2640	350	1.55	1040	BQL	0.27
XR-1679 SP3	2790	378	1.55	1170	BQL	0.22
XR-1680 SP1	4850	306	2.82	816	0.23	0.046
XR-1681 SP1	6010	275	2.7	933	0.56	0.35
XR-1682 SP1	5140	430	1.47	1290	0.5	0.34
XR-1683 SP1	3470	430	2.86	975	BQL	0.088
XR-1683 SP2	3340	471	3.12	912	BQL	0.057
XR-1683 SP3	3320	449	2.83	911	BQL	0.22
XR-1684 SP1	3480	419	1.81	919	BQL	1.29
XR-1684 SP2	3370	410	2.02	948	BQL	0.17
XR-1684 SP3	3440	439	2.33	869	BQL	1.51
XR-1685 SP1	3270	297	1.11	967	BQL	0.56
XR-1685 SP2	3340	308	1.46	925	BQL	0.71
XR-1685 SP3	3200	283	1.03	951	BQL	0.78
XR-1686 SP1	4480	287	2.31	954	0.41	0.19
XR-1687 SP1	5300	318	2.78	1010	0.46	0.51
XR-1688 SP1	3240	216	1.88	1000	BQL	0.073
XR-1688 SP2	3300	188	2.69	951	BQL	0.12
XR-1688 SP3	3230	164	2.5	975	BQL	0.091
XR-1689 SP1	4740	300	2.6	1290	0.51	0.037

Table S3. LA-ICP-MS analysis in ppmw of the studied natural pearls samples from *P. imbricata* (Venezuela).

Samples	**^{23}Na**	**^{24}Mg**	**^{55}Mn**	**^{88}Sr**	**^{137}Ba**	**^{208}Pb**
XR-1028 SP1	4890	292	BQL	894	BQL	1.09
XR-1029 SP1	4720	137	BQL	958	1.37	5.03
XR-1030 SP1	5260	361	BQL	931	BQL	1.99
XR-1031 SP1	5580	134	BQL	796	0.98	4.87
XR-1032 SP1	4990	498	BQL	880	0.92	2.08
XR-1033 SP1	4470	301	BQL	985	3.77	9.99
XR-1034 SP1	4980	232	BQL	913	1.73	16.9
XR-1035 SP1	4730	432	BQL	770	0.92	4.97
XR-1036 SP1	4530	195	BQL	782	BQL	0.61
XR-1037 SP1	5040	398	BQL	881	1.68	0.79
XR-1038 SP1	5020	330	BQL	640	0.82	0.65
XR-1039 SP1	4670	351	BQL	788	0.73	0.66
XR-1040 SP1	4640	264	BQL	733	1.2	0.98
XR-1041 SP1	4830	231	BQL	766	1.31	4.92

XR-1042 SP1	4410	351	BQL	837	0.98	29.4
XR-1043 SP1	5580	335	BQL	733	0.89	57.1
XR-1044 SP1	5530	245	BQL	775	BQL	1.06
XR-1045 SP1	4970	305	BQL	670	BQL	1.93
XR-1046 SP1	4720	297	BQL	821	1.94	1.38
XR-1047 SP1	5450	295	BQL	770	3.67	4.89
XR-1048 SP1	5420	223	BQL	731	0.9	112
XR-1049 SP1	5340	165	BQL	753	1.04	1.31
XR-1050 SP1	4890	241	BQL	687	1.14	0.72
XR-1051 SP1	4590	337	BQL	753	1.21	2.71
XR-1052 SP1	4820	350	BQL	684	0.76	1.4
XR-1053 SP1	5890	272	BQL	825	1.99	7.88
XR-1054 SP1	5480	213	BQL	673	1.02	4.81
XR-1055 SP1	4920	261	BQL	736	BQL	0.77
XR-1056 SP1	4960	227	BQL	944	1.06	0.87
XR-1057 SP1	4290	338	BQL	950	1.1	1.03
XR-1058 SP1	5320	266	BQL	971	BQL	2.03
XR-1059 SP1	5830	334	BQL	787	1.84	1.09
XR-1060 SP1	4990	345	BQL	817	2.01	2.54
XR-1061 SP1	5380	267	BQL	1000	1.79	132
XR-1062 SP1	5730	281	BQL	784	1.25	2.02
XR-1063 SP1	5730	282	BQL	928	1.34	19.5
XR-1064 SP1	4790	425	BQL	1140	0.76	0.76
XR-1065 SP1	5260	319	BQL	889	2.68	2.19
XR-1066 SP1	5120	290	BQL	1200	BQL	10.5
XR-1067 SP1	4580	275	BQL	1120	0.76	42.5
XR-1068 SP1	5200	357	BQL	758	BQL	0.38
XR-1069 SP1	5620	184	BQL	978	1.56	0.88
XR-1070 SP1	5100	188	BQL	842	BQL	1.82
XR-1071 SP1	5540	264	BQL	968	BQL	1.26
XR-1072 SP1	4310	239	BQL	1230	0.79	25.3
XR-1073 SP1	4860	390	BQL	920	2.3	1.07
XR-1075 SP1	5900	275	BQL	767	3.16	1.52
XR-1076 SP1	3900	294	BQL	779	1.42	0.76
XR-1077 SP1	3840	309	BQL	902	1.58	1.97
XR-1078 SP1	4840	223	BQL	752	0.38	1.48
XR-1080 SP1	3620	345	0.49	788	4.13	14.1
XR-1081 SP1	4330	295	0.47	785	0.56	0.76
XR-1082 SP1	4190	246	0.44	680	0.86	10.8
XR-1083 SP1	4520	257	BQL	690	1.21	1.18
XR-1084 SP1	4080	261	BQL	764	0.53	8.94
XR-1085 SP1	3490	272	BQL	821	2.05	0.38
XR-1086 SP1	4160	356	0.83	729	0.43	25.5
XR-1087 SP1	4030	332	BQL	829	0.58	1.65

XR-1088 SP1	3840	156	0.42	682	0.56	1.41
XR-1089 SP1	4270	195	BQL	719	1.09	5.68
XR-1090 SP1	5010	149	0.5	750	0.49	0.53
XR-1091 SP1	4620	156	0.87	785	0.47	3.12
XR-1092 SP1	3890	374	1	1010	3.03	61.2
XR-1093 SP1	4980	133	0.48	663	0.41	1.5
XR-1094 SP1	4340	218	BQL	904	1.06	49
XR-1095 SP1	3840	188	BQL	910	1.36	2.14
XR-1096 SP1	4020	210	0.43	673	3.54	2.85
XR-1097 SP1	4140	271	1.61	874	1.87	10.4
XR-1098 SP1	4370	202	BQL	688	2.39	1.28
XR-1099 SP1	4340	324	BQL	935	1.33	0.65
XR-1100 SP1	5120	192	0.66	839	0.5	1.51
XR-1101 SP1	4620	224	BQL	692	2.25	2.96
XR-1102 SP1	4430	281	BQL	754	1.11	1.24
XR-1103 SP1	4720	201	BQL	750	0.48	0.72
XR-1104 SP1	4090	209	BQL	604	1.29	1.64
XR-1105 SP1	4380	241	0.81	657	0.74	1.17
XR-1106 SP1	4120	178	BQL	868	1.32	1.43
XR-1107 SP1	4130	229	0.43	873	0.92	1.24
XR-1108 SP1	4080	187	BQL	920	1.72	1.72
XR-1109 SP1	5580	148	0.45	1120	1.79	20.6
XR-1110 SP1	4940	290	0.41	945	1.39	14
XR-1111 SP1	4410	335	0.74	1070	1.04	12.3
XR-1112 SP1	4900	431	0.57	930	0.95	2.15
XR-1113 SP1	5010	247	0.55	827	1.01	18.4
XR-1114 SP1	5000	203	0.45	894	0.54	0.65
XR-1115 SP1	4170	282	0.43	776	1.38	1.44
XR-1116 SP1	4660	243	1.59	872	0.41	0.66
XR-1117 SP1	5050	330	0.5	1180	1.2	1.2
XR-1118 SP1	4770	244	BQL	959	1.01	0.97
XR-1119 SP1	4750	425	BQL	1350	1.09	2.23
XR-1120 SP1	4590	319	BQL	855	2.7	1.26
XR-1121 SP1	5260	188	1.36	1170	1.09	5.77
XR-1122 SP1	3810	164	0.44	1350	0.89	4.29
XR-1123 SP1	4640	226	BQL	1010	1.37	52.6
XR-1124 SP1	5170	293	0.83	845	0.46	0.85
XR-1125 SP1	4800	299	0.47	928	0.87	0.96
XR-1126 SP1	5850	235	BQL	880	3.24	1.22
XR-1127 SP1	4680	220	0.51	1030	0.95	0.96
XR-1128 SP1	4760	311	0.49	1000	0.51	1.16
XR-1129 SP1	5310	260	0.47	1110	0.76	43.7
XR-1130 SP1	4490	201	BQL	1160	0.65	0.75
XR-1131 SP1	4830	296	BQL	1050	0.43	0.71

XR-1132 SP1	5130	184	BQL	779	1.91	0.96
XR-1133 SP1	4730	186	0.51	1270	1.47	80.1
XR-1134 SP1	4480	248	0.56	1180	1.5	15.9
XR-1135 SP1	5090	108	0.8	844	1.62	1.15
XR-1136 SP1	4050	275	0.59	860	1.3	0.72
XR-1137 SP1	4270	212	0.42	696	0.35	2.19
XR-1138 SP1	4160	359	BQL	782	0.81	19.7
XR-1139 SP1	4300	323	BQL	730	0.58	2.03
XR-1140 SP1	4720	266	7.57	664	2.1	1.26
XR-1141 SP1	3820	334	BQL	967	2.69	0.87
XR-1142 SP1	4720	222	BQL	784	2.84	1.93
XR-1143 SP1	4800	282	0.38	902	0.82	8.35
XR-1144 SP1	4720	225	BQL	905	1.46	49.1
XR-1145 SP1	4990	213	0.35	749	0.34	1.33
XR-1146 SP1	4840	424	0.91	701	1.08	5.54
XR-1147 SP1	5130	353	BQL	686	1.73	77.8
XR-1148 SP1	3680	374	BQL	792	2.59	24.9
XR-1149 SP1	4510	243	BQL	1010	1.57	3.39
XR-1150 SP1	4170	227	BQL	871	1.13	3.7
XR-1151 SP1	4330	212	BQL	770	1.47	1.32
XR-1152 SP1	4820	209	0.59	779	0.69	0.79
XR-1153 SP1	4180	330	0.35	758	2.89	103
XR-1154 SP1	4480	248	BQL	670	0.62	1.8
XR-1155 SP1	4950	296	0.69	782	0.49	1.16
XR-1156 SP1	4790	403	BQL	902	1.39	1.02
XR-1157 SP1	4980	184	0.43	803	0.6	3.99
XR-1158 SP1	4180	417	8.6	896	0.57	3.34
XR-1159 SP1	4310	395	BQL	838	0.85	37.5
XR-1160 SP1	4870	361	0.4	935	0.94	177
XR-1161 SP1	4400	307	10	937	2.22	29.7
XR-1162 SP1	4140	187	BQL	900	2.38	3.1
XR-1163 SP1	4190	412	2.59	963	4.51	13.3
XR-1164 SP1	4690	272	0.49	852	0.52	7.29
XR-1165 SP1	4640	293	0.33	805	1.49	22.4
XR-1166 SP1	4570	223	0.26	870	0.76	9.29
XR-1167 SP1	4420	181	BQL	905	1.18	2.56
XR-1168 SP1	4250	294	0.23	791	2.08	1.15
XR-1169 SP1	5060	274	0.63	934	0.55	0.94
XR-1170 SP1	4420	171	BQL	719	0.42	12.2
XR-1171 SP1	4770	165	0.34	729	0.4	0.42
XR-1172 SP1	4470	364	6.85	793	0.71	3.99
XR-1173 SP1	4570	271	0.38	698	1.98	3.81
XR-1174 SP1	4360	282	BQL	788	2.07	1.29
XR-1175 SP1	4530	235	0.28	700	0.91	0.87

XR-1176 SP1	4270	166	0.23	770	1.38	0.82
XR-1177 SP1	3970	301	0.41	695	6.58	1.81
XR-1178 SP1	4200	254	BQL	827	1.18	1.68
XR-1179 SP1	3640	198	0.27	786	3.96	2.26
XR-1180 SP1	5290	199	0.31	803	0.54	0.7
XR-1181 SP1	4390	309	0.37	822	3.8	1.86
XR-1182 SP1	3890	284	0.33	885	1.22	13
XR-1183 SP1	4220	324	0.21	826	0.96	5.18
XR-1184 SP1	4470	244	BQL	889	0.5	0.9
XR-1185 SP1	4290	250	0.43	758	0.56	2.74
XR-1186 SP1	4110	311	0.21	772	2.41	4.68
XR-1187 SP1	4210	364	0.51	715	3.74	4.26
XR-1188 SP1	4050	210	1.75	1020	0.74	2.16
XR-1189 SP1	4280	346	BQL	789	1.7	1.34
XR-1190 SP1	5000	245	BQL	717	0.62	3.28
XR-1191 SP1	5000	408	0.79	806	1.22	5.14
XR-1192 SP1	4970	262	BQL	848	0.38	0.51
XR-1193 SP1	4700	300	BQL	936	0.97	0.75
XR-1194 SP1	4840	413	0.49	753	5.78	13.1
XR-1195 SP1	4810	311	BQL	837	0.64	0.9
XR-1196 SP1	5180	268	BQL	838	0.86	41.9
XR-1197 SP1	4930	281	BQL	851	0.42	0.9
XR-1198 SP1	4700	302	BQL	811	0.95	1.94
XR-1199 SP1	4820	254	BQL	994	0.9	1.34
XR-1200 SP1	5050	341	0.78	817	9.76	23.1
XR-1201 SP1	4790	218	BQL	982	3.16	1.7
XR-1202 SP1	4900	256	BQL	838	2.06	4.6
XR-1203 SP1	4710	276	BQL	889	0.93	2.83
XR-1204 SP1	5270	208	BQL	786	0.81	0.42
XR-1205 SP1	4210	280	BQL	791	0.69	3.17
XR-1206 SP1	4870	340	BQL	862	4.07	2.44
XR-1207 SP1	4850	344	BQL	799	1.23	1.1
XR-1208 SP1	4770	406	BQL	1030	2	1.23
XR-1209 SP1	4740	224	BQL	840	2.67	4.09
XR-1210 SP1	4330	270	BQL	890	0.6	0.89
XR-1211 SP1	4660	332	0.71	800	0.4	0.53
XR-1212 SP1	4670	202	BQL	945	2.01	15.8
XR-1213 SP1	4800	300	BQL	889	1.97	1.99
XR-1214 SP1	4840	242	3.51	976	1.06	11.6
XR-1215 SP1	4670	346	BQL	850	0.58	5.43
XR-1216 SP1	4900	233	0.61	998	2.54	6.52
XR-1217 SP1	4840	220	BQL	823	0.95	0.69
XR-1218 SP1	4770	317	BQL	1020	3.18	33.4
XR-1219 SP1	4730	505	BQL	829	0.28	0.54

XR-1220 SP1	3590	251	0.8	870	0.49	0.77
XR-1221 SP1	3750	225	0.84	1050	0.85	4.82
XR-1222 SP1	3810	221	0.38	1330	1.49	44.2
XR-1223 SP1	3940	177	0.4	849	0.87	0.58
XR-1224 SP1	4590	186	0.35	702	1.25	0.64
XR-1225 SP1	3540	227	BQL	913	1.12	10.8
XR-1226 SP1	4540	246	0.33	928	0.71	44.2
XR-1227 SP1	3940	250	BQL	662	0.15	0.74
XR-1228 SP1	4070	114	BQL	786	0.62	1.14
XR-1229 SP1	3600	332	BQL	828	1.6	0.66
XR-1230 SP1	4600	142	0.54	632	0.37	3.06
XR-1231 SP1	4270	242	BQL	726	3.02	0.74
XR-1232 SP1	4180	201	0.27	687	0.73	13.3
XR-1233 SP1	4380	234	0.45	807	0.75	55.1
XR-1234 SP1	4410	172	0.47	632	0.68	4.96
XR-1235 SP1	4270	316	0.5	679	1.7	7.47
XR-1236 SP1	4390	328	0.43	750	2.07	3.2
XR-1237 SP1	4230	238	BQL	762	1.12	0.72
XR-1238 SP1	4370	289	0.32	735	0.93	16.5
XR-1239 SP1	4780	202	BQL	605	0.85	1.08
XR-1240 SP1	3870	212	0.38	782	1.55	1.3
XR-1241 SP1	4010	213	0.34	616	0.34	1.24
XR-1243 SP1	3760	278	BQL	751	0.29	0.51
XR-1244 SP1	4030	178	0.59	690	0.4	0.4
XR-1245 SP1	4050	271	BQL	722	0.49	19.3
XR-1246 SP1	4380	283	BQL	761	1.08	1.23
XR-1247 SP1	4310	206	BQL	670	0.44	1.11
XR-1248 SP1	4270	120	0.38	720	0.68	0.71
XR-1249 SP1	3850	231	BQL	762	1.54	1.02
XR-1250 SP1	4470	167	0.31	639	0.23	2.71
XR-1251 SP1	4100	235	0.39	616	0.81	1.02
XR-1252 SP1	4370	233	BQL	708	0.92	1.4
XR-1253 SP1	4510	222	0.48	791	0.86	0.57
XR-1254 SP1	4790	230	BQL	670	1.39	3.19
XR-1255 SP1	4110	169	BQL	1030	0.73	11.6
XR-1256 SP1	4320	370	BQL	706	0.3	0.98
XR-1257 SP1	3850	175	0.45	655	0.26	0.46
XR-1258 SP1	4060	363	BQL	782	0.41	0.64
XR-1259 SP1	4520	204	BQL	677	0.73	2.83
XR-1260 SP1	3950	202	0.46	737	0.81	1.06
XR-1261 SP1	4020	204	BQL	689	1.73	0.69
XR-1262 SP1	4480	175	BQL	974	0.51	6.34
XR-1263 SP1	3930	225	BQL	795	0.32	0.8
XR-1264 SP1	4350	364	BQL	706	1.54	5.99

XR-1265 SP1	3940	291	BQL	823	0.88	1.17
XR-1266 SP1	4040	247	0.42	819	0.71	0.57
XR-1267 SP1	3860	289	BQL	806	0.45	0.45
XR-1268 SP1	4650	218	BQL	778	0.42	6.92
XR-1269 SP1	3750	151	BQL	978	2.27	1.72
XR-1270 SP1	4270	531	BQL	908	0.85	0.93
XR-1271 SP1	4000	197	BQL	829	1.17	0.74
XR-1272 SP1	4800	305	0.5	771	1.4	2.13
XR-1273 SP1	3430	175	BQL	1340	1.17	14.9
XR-1274 SP1	4470	373	0.63	813	4.35	7.23
XR-1275 SP1	4650	213	0.88	811	0.62	1
XR-1276 SP1	4700	267	BQL	894	1.6	12.5
XR-1277 SP1	4510	157	BQL	976	1.11	3.86
XR-1278 SP1	4730	201	6.21	976	0.97	9.51
XR-1279 SP1	4670	221	BQL	1030	1.56	2.17
XR-1280 SP1	4770	236	BQL	982	0.89	5.42
XR-1281 SP1	3820	300	0.54	917	0.97	14
XR-1282 SP1	3870	228	BQL	840	2.37	1.27
XR-1283 SP1	4440	166	BQL	1150	0.53	0.59
XR-1284 SP1	4950	223	BQL	715	1.72	1.75
XR-1285 SP1	4360	248	BQL	862	0.63	1.55
XR-1286 SP1	4590	203	BQL	865	0.31	1.15
XR-1287 SP1	4500	298	BQL	872	1.34	1.82
XR-1288 SP1	4450	266	BQL	776	3.58	6.83
XR-1289 SP1	4050	141	0.46	901	1.46	4.29
XR-1290 SP1	4080	240	BQL	1100	1.06	1.18
XR-1291 SP1	3580	214	BQL	886	0.45	0.53
XR-1292 SP1	4790	191	0.57	769	2.49	1.95
XR-1293 SP1	4070	245	0.89	1110	1.04	1.14
XR-1294 SP1	4150	121	0.62	843	1.53	3.62
XR-1295 SP1	5990	168	BQL	881	1.65	0.39
XR-1296 SP1	4450	246	BQL	784	2.07	0.8
XR-1297 SP1	4550	213	BQL	875	0.33	2.74
XR-1298 SP1	4400	273	0.45	755	0.69	0.81
XR-1299 SP1	4130	381	BQL	871	1.41	2.24
XR-1300 SP1	4270	234	BQL	861	1.76	1.1
XR-1301 SP1	4730	298	BQL	870	0.63	1.11
XR-1302 SP1	4570	165	BQL	1040	0.73	3.74
XR-1303 SP1	4640	211	BQL	775	0.64	1.96
XR-1304 SP1	4380	150	0.68	947	3.64	6.28
XR-1305 SP1	4540	415	BQL	981	0.47	0.93
XR-1306 SP1	3810	195	BQL	1240	1.34	3.26
XR-1307 SP1	3780	421	0.89	848	0.52	1.11
XR-1308 SP1	3670	227	BQL	743	1.51	3.17

XR-1309 SP1	4630	202	1.41	1020	1.78	15.9
XR-1310 SP1	4420	280	0.128	1120	1.15	1.22
XR-1311 SP1	4050	235	BQL	974	1.09	0.86
XR-1312 SP1	4350	371	0.54	1160	1.53	18.1
XR-1313 SP1	4320	192	BQL	804	0.84	0.77
XR-1314 SP1	4270	245	BQL	727	0.32	0.77
XR-1315 SP1	4440	199	BQL	730	0.56	2.13
XR-1316 SP1	4470	215	BQL	888	1.56	5.89
XR-1317 SP1	3590	329	BQL	686	0.68	0.49
XR-1318 SP1	3670	274	0.35	661	2.01	1.17
XR-1319 SP1	3200	245	BQL	746	0.96	10.6
XR-1320 SP1	4310	155	BQL	658	0.77	1.01
XR-1321 SP1	3710	234	BQL	670	1.07	0.95
XR-1322 SP1	3780	228	BQL	572	0.55	1.23
XR-1323 SP1	3660	243	BQL	815	2.09	9.95
XR-1324 SP1	3870	154	BQL	825	2.15	1.92
XR-1326 SP1	3810	237	BQL	683	0.48	0.86
XR-1327 SP1	3490	381	BQL	949	2.02	59.7
XR-1328 SP1	3760	212	BQL	637	1.46	0.69
XR-1329 SP1	3430	225	BQL	715	1.14	1.08
XR-1330 SP1	3530	326	BQL	647	0.8	4.63
XR-1331 SP1	3310	213	BQL	704	0.38	0.45
XR-1333 SP1	3730	263	BQL	674	1.48	0.7
XR-1335 SP1	3910	267	BQL	647	1.06	30.3
XR-1336 SP1	3760	268	BQL	691	0.71	0.63
XR-1337 SP1	3320	325	BQL	689	2.76	1.63
XR-1338 SP1	5190	348	BQL	1100	3.14	7.8
XR-1339 SP1	5000	376	BQL	1140	1.98	1.25
XR-1341 SP1	5620	289	BQL	1100	0.79	1.06
XR-1342 SP1	5710	386	0.47	1020	2.84	5.15
XR-1343 SP1	4360	463	BQL	1620	1.85	35
XR-1344 SP1	5810	206	0.37	988	0.6	1.86
XR-1345 SP1	5310	298	BQL	1280	0.53	0.98
XR-1346 SP1	5160	395	0.41	924	5.55	7.75
XR-1347 SP1	6130	273	0.36	1080	0.35	2.37
XR-1348 SP1	5570	311	BQL	1030	1.74	0.93
XR-1349 SP1	5490	335	BQL	1180	2.12	10.9
XR-1350 SP1	5750	274	0.48	1070	1.09	3.59
XR-1351 SP1	5480	296	BQL	944	1.29	5.97
XR-1352 SP1	5770	244	0.37	1120	1.52	4.54
XR-1353 SP1	5090	302	0.36	1130	1.66	1
XR-1354 SP1	5490	280	0.72	1200	2.46	13.5
XR-1355 SP1	5210	406	0.64	1090	3.62	19.5
XR-1356 SP1	5560	269	0.4	1170	0.69	4.05

XR-1357 SP1	5050	336	BQL	1160	1.59	0.92
XR-1358 SP1	5390	183	BQL	880	1.94	0.99
XR-1359 SP1	4970	371	2.95	1070	0.43	1.56
XR-1360 SP1	5140	321	BQL	1090	1.19	25.9
XR-1361 SP1	4750	172	BQL	1570	1.85	7.2
XR-1362 SP1	4950	291	BQL	1010	0.78	0.72
XR-1363 SP1	5440	153	0.44	976	1.04	1.67
XR-1364 SP1	5040	190	BQL	1240	3.05	4.51
XR-1365 SP1	4810	293	0.74	868	3.19	5.28
XR-1366 SP1	5760	234	BQL	1140	1.54	7.1
XR-1367 SP1	4400	243	BQL	1290	2.68	3.42
XR-1368 SP1	5490	302	0.48	1150	2.03	148
XR-1369 SP1	4950	245	BQL	942	3.28	5.69
XR-1370 SP1	5770	240	0.52	1170	2.72	4.07
XR-1371 SP1	5650	339	5.64	1060	3.13	9.45
XR-1372 SP1	5330	237	BQL	1280	1.64	5.66
XR-1373 SP1	5430	212	BQL	1040	1.36	1.28
XR-1374 SP1	5240	224	BQL	1030	1.18	10.7
XR-1375 SP1	4600	327	BQL	1120	3.02	1.07
XR-1376 SP1	5200	305	0.62	916	0.79	1.76
XR-1377 SP1	5720	297	0.6	1020	1.38	29.8
XR-1378 SP1	4830	146	0.39	1360	1.17	23.7
XR-1379 SP1	5510	127	BQL	900	0.74	0.97
XR-1380 SP1	4740	347	0.41	1380	3.05	2.51
XR-1381 SP1	5720	271	0.45	877	1.57	1.22
XR-1382 SP1	4990	256	BQL	998	2.44	3.22
XR-1383 SP1	4970	178	BQL	961	2.19	4.87
XR-1384 SP1	5020	230	0.56	1030	1.35	4.49
XR-1385 SP1	5490	336	0.54	942	1.51	2.47
XR-1386 SP1	5310	308	BQL	1130	1.48	7.07
XR-1387 SP1	5300	397	BQL	1000	1.76	1.96
XR-1388 SP1	5060	200	BQL	1050	0.42	1.44
XR-1389 SP1	5170	294	BQL	894	1.88	3.3
XR-1390 SP1	4980	238	BQL	1010	2.89	1.37
XR-1391 SP1	6160	268	BQL	1030	1.65	1.27
XR-1392 SP1	5870	388	BQL	971	3.06	1.3
XR-1393 SP1	5250	248	BQL	889	1.82	13.6
XR-1394 SP1	4230	368	BQL	991	3.05	8.71
XR-1395 SP1	4950	435	BQL	1010	3.1	26.8
XR-1396 SP1	4840	219	BQL	738	2.67	1.51
XR-1397 SP1	5570	276	0.42	1030	4.13	1.8
XR-1398 SP1	6010	343	0.44	893	0.97	6.88
XR-1399 SP1	5050	392	BQL	904	2.27	1.5
XR-1400 SP1	4580	362	BQL	756	1.77	1.94

XR-1401 SP1	5560	234	BQL	1240	1.98	31.6
XR-1402 SP1	5280	257	0.46	1070	1.86	85
XR-1403 SP1	4600	325	BQL	1060	2.83	2.08
XR-1404 SP1	5020	360	BQL	1530	2.14	3.97
XR-1405 SP1	5410	255	BQL	1160	0.69	2.35
XR-1406 SP1	6110	243	BQL	833	0.53	0.96
XR-1407 SP1	5260	291	BQL	1090	1.96	1.21
XR-1408 SP1	4940	293	BQL	1160	1.91	159
XR-1409 SP1	4700	318	BQL	831	1.22	28.4
XR-1410 SP1	5740	259	BQL	944	2.28	1.91
XR-1411 SP1	5110	249	BQL	896	1.02	1.06
XR-1412 SP1	5410	214	0.44	990	3.63	21.7
XR-1413 SP1	4690	466	1.06	990	0.83	5.51
XR-1414 SP1	5020	251	BQL	1160	1.09	0.8
XR-1415 SP1	5490	346	BQL	1130	2.9	2.04
XR-1416 SP1	5430	254	BQL	1010	1.02	3.49
XR-1417 SP1	4790	319	BQL	1270	3.31	1.72
XR-1418 SP1	4770	239	BQL	792	3.29	1.18
XR-1419 SP1	4820	267	BQL	825	0.65	0.86
XR-1420 SP1	5450	368	BQL	957	0.8	2.97
XR-1421 SP1	5000	403	BQL	1050	1.14	0.82
XR-1422 SP1	4900	260	BQL	1240	6.2	14.2
XR-1423 SP1	4720	224	BQL	1030	1.2	109
XR-1424 SP1	4290	242	BQL	1060	3.62	1.85
XR-1425 SP1	5270	266	BQL	747	3.15	2.05
XR-1426 SP1	4360	257	1.02	1020	1.17	1
XR-1427 SP1	4540	172	BQL	747	1.48	1.45
XR-1428 SP1	4840	166	BQL	720	1.61	0.74
XR-1429 SP1	4420	214	BQL	964	1.64	6.59
XR-1430 SP1	4430	276	BQL	1030	2.6	2.57
XR-1431 SP1	4890	275	BQL	857	2.8	1.72
XR-1432 SP1	4610	270	BQL	961	1.34	0.88
XR-1433 SP1	4750	280	0.52	969	0.74	1.16
XR-1434 SP1	4620	260	BQL	870	1.21	2.25
XR-1435 SP1	4570	475	BQL	854	0.65	1.89
XR-1436 SP1	4560	190	BQL	950	0.45	1.5
XR-1437 SP1	4980	316	BQL	838	1.85	1.29
XR-1438 SP1	4650	272	BQL	861	2.1	2.83
XR-1439 SP1	4910	240	0.48	1090	0.66	8.25
XR-1440 SP1	4050	237	BQL	1020	1.92	2.13
XR-1441 SP1	4520	308	BQL	917	1.69	2.85
XR-1442 SP1	4790	197	BQL	837	0.68	2.54
XR-1443 SP1	4070	191	BQL	833	1.03	0.78
XR-1444 SP1	3660	303	BQL	978	1.26	7.13

XR-1445 SP1	4350	266	BQL	780	1.88	3.52
XR-1446 SP1	3480	174	1.66	748	2.47	12.1
XR-1447 SP1	4600	235	BQL	887	3.44	2.26
XR-1448 SP1	4050	293	BQL	929	4.94	6.76
XR-1449 SP1	4140	174	BQL	815	0.45	2.79
XR-1450 SP1	5200	193	0.58	774	2.29	4.82
XR-1451 SP1	4210	230	0.54	850	2.18	6.25
XR-1452 SP1	4490	218	BQL	701	0.74	1.79
XR-1453 SP1	4360	234	0.64	854	2.4	8.74
XR-1454 SP1	3960	195	BQL	750	0.6	1.56
XR-1455 SP1	4200	275	0.56	911	6.43	24.6
XR-1456 SP1	3650	282	BQL	914	2.93	4.08
XR-1457 SP1	4710	276	0.81	919	7.78	3.92
XR-1458 SP1	4390	320	0.53	1140	1.36	66.9
XR-1459 SP1	3910	185	BQL	773	4.82	2.69
XR-1460 SP1	4480	247	0.84	1000	0.85	2.52
XR-1461 SP1	3620	291	0.49	980	2.05	3.31
XR-1462 SP1	4160	181	BQL	752	0.8	3.59
XR-1463 SP1	4300	346	0.65	764	2.51	8.17
XR-1464 SP1	3540	206	BQL	1090	1.01	2.86
XR-1465 SP1	4190	129	BQL	903	0.91	6.65
XR-1466 SP1	4340	286	BQL	769	1.82	4.36
XR-1467 SP1	4110	424	0.73	801	2.42	3.76
XR-1468 SP1	3950	232	BQL	863	4.24	2.93
XR-1469 SP1	4710	178	BQL	793	0.46	2.42
XR-1470 SP1	4530	210	0.51	830	0.82	7.97
XR-1471 SP1	4500	318	0.47	910	5.83	3.38
XR-1472 SP1	4790	184	0.51	1030	4.82	10.7
XR-1473 SP1	4170	244	BQL	1120	1.09	21.5
XR-1474 SP1	4000	235	0.75	905	2.66	4.12
XR-1475 SP1	4580	191	BQL	779	4.01	3.29
XR-1476 SP1	4210	308	BQL	891	2.96	2.61
XR-1477 SP1	4250	213	BQL	841	2.47	20.4
XR-1478 SP1	4060	173	0.52	1400	2.49	3.32
XR-1479 SP1	4160	175	BQL	929	1.07	1.06
XR-1480 SP1	4640	300	BQL	898	2.67	2.83
XR-1481 SP1	5760	365	1.02	887	4.29	6.39
XR-1482 SP1	5350	272	BQL	1090	0.78	2.53
XR-1483 SP1	5220	279	BQL	904	0.9	1.57
XR-1484 SP1	5510	314	1.33	1200	1.1	6.75
XR-1485 SP1	5030	258	BQL	1060	0.45	1.11
XR-1487 SP1	4850	280	BQL	1100	1.16	0.93
XR-1488 SP1	4750	149	BQL	866	0.63	1.09
XR-1489 SP1	6040	184	BQL	899	0.38	0.62

XR-1490 SP1	5890	319	BQL	1300	0.97	3.38
XR-1491 SP1	5330	386	0.76	853	0.68	2.5
XR-1492 SP1	5810	258	BQL	1180	2.24	1.12
XR-1493 SP1	6090	269	BQL	1010	0.52	0.87
XR-1494 SP1	5500	259	BQL	998	1.66	2.19
XR-1495 SP1	4940	304	BQL	1050	1.39	13
XR-1496 SP1	4420	269	BQL	1140	1.97	1.15
XR-1497 SP1	4960	281	BQL	994	0.37	1.56
XR-1498 SP1	4400	228	0.75	920	0.55	0.92
XR-1499 SP1	5300	261	BQL	903	1.59	1.25
XR-1500 SP1	4850	185	BQL	850	1.74	0.75
XR-1501 SP1	4790	278	BQL	972	0.84	0.76
XR-1502 SP1	4190	243	BQL	939	1.93	21.9
XR-1503 SP1	4870	362	BQL	865	0.83	4.8
XR-1504 SP1	4540	228	BQL	802	1.47	1.64
XR-1505 SP1	4370	345	2.22	740	0.6	1.21
XR-1506 SP1	4590	255	BQL	878	0.58	1.84
XR-1507 SP1	5170	210	BQL	998	0.64	1.85
XR-1508 SP1	5410	284	1.5	952	0.8	55.3
XR-1509 SP1	4920	195	BQL	1000	1.73	1.96
XR-1510 SP1	4770	249	BQL	961	0.67	34.3
XR-1511 SP1	4360	199	BQL	1150	1.05	2.21
XR-1512 SP1	4800	156	BQL	790	2.16	2.04
XR-1513 SP1	4340	252	BQL	1020	1.67	5.17
XR-1514 SP1	4180	289	BQL	1010	1.9	1.33
XR-1515 SP1	4540	371	BQL	907	3.78	5.18
XR-1516 SP1	4430	391	BQL	912	0.87	0.65
XR-1517 SP1	4530	339	BQL	887	2.99	1.21
XR-1518 SP1	4170	268	BQL	1000	0.92	2.29
XR-1519 SP1	5020	158	0.64	763	0.4	38.5
XR-1520 SP1	5220	205	BQL	785	0.45	0.79
XR-1521 SP1	4480	173	1.65	839	0.51	1.05
XR-1522 SP1	4830	314	BQL	860	2.41	1.54
XR-1523 SP1	4760	253	BQL	949	3.39	0.89
XR-1524 SP1	4430	229	BQL	864	3.26	2.41
XR-1525 SP1	4230	291	BQL	966	0.41	0.63
XR-1526 SP1	4540	244	0.87	1010	1.26	1.72
XR-1527 SP1	5040	345	10.3	881	1.98	90.4
XR-1528 SP1	4830	281	BQL	844	0.65	0.86
XR-1529 SP1	4330	224	BQL	903	0.73	30.2
XR-1530 SP1	5190	264	BQL	989	1.2	18.7
XR-1531 SP1	4830	213	BQL	878	0.77	1.29
XR-1532 SP1	4770	221	BQL	721	0.36	3.97
XR-1533 SP1	4070	279	BQL	744	0.41	1.1

XR-1534 SP1	4590	436	BQL	782	1.13	0.66
XR-1535 SP1	4500	300	BQL	876	0.7	1.18
XR-1536 SP1	5070	134	2.7	823	1.09	1.41
XR-1537 SP1	4300	263	BQL	904	1.29	0.89
XR-1538 SP1	4480	232	BQL	992	1.13	0.7
XR-1539 SP1	4330	180	0.91	954	2.88	3.46
XR-1540 SP1	4350	287	BQL	1040	0.57	13.4
XR-1541 SP1	3840	165	BQL	957	0.5	0.35
XR-1542 SP1	4510	235	BQL	977	0.78	4.37
XR-1543 SP1	4430	271	BQL	930	1.17	2.77
XR-1544 SP1	4940	369	BQL	1020	1.78	25
XR-1545 SP1	5080	248	BQL	822	0.66	0.83
XR-1546 SP1	5370	309	4.48	1010	0.98	9.04
XR-1547 SP1	4830	374	BQL	965	1.45	0.86
XR-1548 SP1	4770	248	BQL	1170	0.87	22.5
XR-1549 SP1	5380	260	BQL	925	0.69	2.05
XR-1550 SP1	4930	342	BQL	833	1.39	2.64
XR-1551 SP1	5230	258	BQL	1020	1.17	3.77
XR-1552 SP1	5140	226	BQL	859	0.52	0.6
XR-1553 SP1	4750	201	BQL	905	0.67	0.67
XR-1554 SP1	4690	256	BQL	805	1.66	2.15
XR-1555 SP1	5880	122	0.63	1030	1.39	1.64
XR-1556 SP1	5490	340	2.29	845	0.87	2.18
XR-1557 SP1	4420	355	0.61	1100	5.74	1.81
XR-1558 SP1	4800	425	0.77	896	0.83	4.46
XR-1559 SP1	5130	263	BQL	931	1.76	10.9
XR-1560 SP1	4880	221	BQL	941	0.75	0.91
XR-1561 SP1	4120	248	BQL	1000	1.21	1.96
XR-1562 SP1	4300	358	BQL	1260	1.29	1.5
XR-1563 SP1	4950	174	BQL	1160	1.59	4.55
XR-1564 SP1	4990	190	BQL	908	0.89	3.52
XR-1565 SP1	4980	266	BQL	1030	2.55	2.41
XR-1566 SP1	4550	315	BQL	972	0.73	1.21
XR-1567 SP1	4620	388	BQL	1130	4.55	11.9
XR-1568 SP1	4880	256	BQL	901	3.06	16.3
XR-1569 SP1	5200	281	BQL	837	0.43	1.07
XR-1570 SP1	5090	148	BQL	1280	1.18	45.4
XR-1571 SP1	4840	296	BQL	918	0.97	1.26
XR-1572 SP1	5250	177	BQL	1020	0.77	5.94
XR-1573 SP1	4670	450	0.76	1450	10.6	9.04
XR-1574 SP1	4400	395	BQL	1320	1.02	4.07
XR-1575 SP1	4040	284	BQL	999	1.78	1.1
XR-1576 SP1	4530	293	BQL	959	0.73	0.89
XR-1577 SP1	3380	338	BQL	944	11	3.82

XR-1579 SP1	4360	344	BQL	1040	0.78	2.2
XR-1580 SP1	3830	318	BQL	1090	0.9	6.22
XR-1581 SP1	4790	401	BQL	949	1.24	2.61
XR-1582 SP1	3780	354	BQL	1210	4.67	5.71
XR-1583 SP1	4020	316	BQL	878	2.15	3.87
XR-1584 SP1	4070	221	BQL	1170	1.82	2.21
XR-1585 SP1	3930	507	4.9	1110	1.18	13.3
XR-1586 SP1	4330	238	BQL	1010	BQL	1
XR-1587 SP1	4370	389	BQL	1020	4.43	1.72
XR-1588 SP1	4720	274	BQL	1090	0.65	23.4
XR-1589 SP1	5240	237	BQL	786	2.12	1.63
XR-1590 SP1	3780	352	BQL	839	1.01	0.83
XR-1591 SP1	4080	177	BQL	1250	1.2	15
XR-1593 SP1	3760	179	BQL	875	0.69	1.04
XR-1594 SP1	4430	203	BQL	963	2.4	3.67
XR-1595 SP1	4200	218	BQL	851	1.96	5.53
XR-1596 SP1	5030	186	BQL	891	1.55	1.04
XR-1597 SP1	4100	268	BQL	961	3.14	63.4
XR-1599 SP1	4540	285	BQL	1040	2.05	8.54
XR-1753 SP1	4010	239	BQL	1010	1.17	2.41
XR-1754 SP1	3370	250	1.62	945	0.76	1.06
XR-1755 SP1	3570	258	BQL	982	3.25	1.79
XR-1756 SP1	3980	315	BQL	853	0.51	0.76
XR-1757 SP1	4590	247	BQL	875	0.95	5.59
XR-1758 SP1	4270	218	BQL	1010	3.08	3.79
XR-1759 SP1	4380	310	BQL	1020	0.67	10.5
XR-1760 SP1	4230	320	BQL	933	0.91	4.86
XR-1761 SP1	4110	187	BQL	793	1.75	1.08
XR-1762 SP1	3940	244	BQL	1290	BQL	0.81
XR-1763 SP1	3750	320	BQL	1230	1.43	4.73
XR-1764 SP1	3930	217	BQL	765	0.39	0.94
XR-1765 SP1	4790	185	BQL	1100	1.68	2.52
XR-1766 SP1	3910	175	BQL	1110	1.06	20.9
XR-1767 SP1	3980	319	BQL	882	1.02	3.21
XR-1768 SP1	4330	366	BQL	1040	4.4	9.23
XR-1769 SP1	3830	210	BQL	1030	1.4	17.5
XR-1770 SP1	4330	281	BQL	1140	1.55	76.8
XR-1771 SP1	4340	170	BQL	956	0.93	0.61
XR-1772 SP1	4520	211	BQL	851	1.16	5.52
XR-1773 SP1	4280	336	BQL	881	0.99	2.1
XR-1774 SP1	4050	342	BQL	918	2.44	0.95
XR-1775 SP1	4550	310	1.06	875	0.76	6.33
XR-1776 SP1	4180	273	BQL	890	0.61	2.76
XR-1777 SP1	3850	446	BQL	877	0.75	1.35

XR-1778 SP1	4200	270	BQL	815	1.23	1.28
XR-1779 SP1	3820	296	BQL	910	0.62	5.23
XR-1780 SP1	4060	309	BQL	816	0.74	42.3
XR-1782 SP1	4030	244	BQL	1020	3.08	1.61
XR-1783 SP1	3640	396	BQL	996	1.91	0.84
XR-1784 SP1	4250	383	BQL	973	2.04	2.6
XR-1785 SP1	4250	269	BQL	1100	3.2	3.63
XR-1786 SP1	4320	224	BQL	931	5.41	67.7
XR-1787 SP1	4270	384	BQL	1110	1.23	5.13
XR-1788 SP1	3900	266	BQL	917	0.54	1.63
XR-1789 SP1	4320	225	BQL	1020	1.67	1.12
XR-1790 SP1	4420	275	BQL	1100	1.04	2.96
XR-1791 SP1	4020	201	BQL	1100	1.35	1.45
XR-1792 SP1	4830	320	BQL	857	1.37	5.62
XR-1793 SP1	4100	209	BQL	734	0.97	0.65
XR-1794 SP1	4240	266	0.27	682	0.83	7.38
XR-1795 SP1	5330	332	0.3	609	0.43	0.39
XR-1796 SP1	4510	278	0.46	776	2	11.1
XR-1797 SP1	4860	231	BQL	814	0.94	1.03
XR-1798 SP1	4940	306	0.36	668	1.95	0.83
XR-1799 SP1	4600	222	0.27	920	0.81	0.95
XR-1800 SP1	5280	172	3.27	640	0.3	0.72
XR-1801 SP1	4060	158	BQL	816	1.13	31.2
XR-1802 SP1	3700	168	BQL	896	1.88	0.95
XR-1803 SP1	4230	172	BQL	685	9.61	3.54
XR-1804 SP1	4750	210	BQL	684	1.84	1.71
XR-1805 SP1	3740	380	3.35	1380	2.49	24.9
XR-1806 SP1	5450	290	0.52	766	1.85	11.3
XR-1807 SP1	4530	264	BQL	876	0.35	3.88
XR-1808 SP1	3950	390	0.26	676	0.69	0.42
XR-1809 SP1	4060	265	BQL	807	1.16	1.18
XR-1810 SP1	5050	290	0.36	1030	0.79	10.9
XR-1811 SP1	4050	231	0.3	705	1.27	5.72
XR-1812 SP1	4250	261	BQL	606	2.53	0.59
XR-1813 SP1	4880	324	1.59	703	0.93	14.9
XR-1814_1 SP1	4630	246	0.42	752	1.05	1.77
XR-1814_2 SP1	3820	202	0.28	704	2.05	2.81
XR-1814_3 SP1	4970	118	0.32	662	0.39	5.63
XR-1814_4 SP1	5040	281	0.97	920	5.72	10.1
XR-1814_5 SP1	3760	195	BQL	821	4.33	7.27
XR-1814_6 SP1	4580	136	0.46	721	1.75	5.78
XR-1814_7 SP1	4670	211	0.37	958	1.22	3.13
XR-1814_8 SP1	4490	287	0.7	641	1.86	3.1
XR-1814_9 SP1	4980	252	2.93	732	0.78	133

XR-1814_10 SP1	4920	255	1.23	900	1.46	5.67
XR-1814_11 SP1	4120	274	0.68	859	6.37	5.83
XR-1814_12 SP1	4710	218	0.52	763	0.78	4.06
XR-1814_14 SP1	4440	217	0.42	1060	4.32	34
XR-1814_15 SP1	4510	262	0.7	806	1.89	10.3
XR-1814_16 SP1	5290	201	0.49	732	0.37	23.2
XR-1814_17 SP1	4730	188	0.57	761	3.12	6.27
XR-1814_18 SP1	4960	226	0.69	782	1.52	4.21
XR-1814_19 SP1	4650	189	0.75	917	2.41	3.4
XR-1814_20 SP1	4800	257	BQL	860	2.89	3.78
XR-1814_21 SP1	5130	152	0.36	893	0.76	35.6
XR-1814_22 SP1	4810	164	0.41	869	2.44	5
XR-1814_34 SP1	4910	289	BQL	853	0.87	13.1
XR-1814_35 SP1	4950	236	0.83	780	1.24	8.18
XR-1814_36 SP1	5140	240	0.4	856	2.54	50
XR-1814_37 SP1	5240	269	0.44	644	3.23	9
XR-1814_38 SP1	5170	305	2.11	840	0.61	2.79
XR-1814_39 SP1	4990	109	0.41	742	0.32	1.46
XR-1814_40 SP1	5710	264	0.39	720	2.54	2.76
XR-1814_41 SP1	5600	298	0.85	884	1.07	9
XR-1814_43 SP1	4770	223	0.51	838	3.67	14.1
XR-1814_23 SP1	5700	307	0.92	936	1.81	7.79
XR-1814_24 SP1	3830	218	1.01	905	2.56	12.9
XR-1814_25 SP1	4670	365	1.8	952	3.12	21.9
XR-1814_26 SP1	4600	200	0.79	697	0.38	7.39
XR-1814_27 SP1	5190	345	1.89	688	1.63	16
XR-1814_28 SP1	4300	289	BQL	1110	1.24	4.9
XR-1814_29 SP1	4800	276	2.31	699	0.62	4.58
XR-1814_30 SP1	5250	115	BQL	666	0.99	22.9
XR-1814_31 SP1	5850	129	1.07	604	0.38	6.57
XR-1814_32 SP1	4720	157	BQL	580	0.44	3.31
XR-1814_33 SP1	5110	310	BQL	652	1.88	36.2
XR-1814_44 SP1	5310	326	BQL	835	1.15	21.4
XR-1814_45 SP1	5430	194	BQL	718	0.41	13.1
XR-1814_47 SP1	4600	263	BQL	751	2.9	6.44
XR-1814_48 SP1	4840	269	BQL	623	0.66	1.48
XR-1814_49 SP1	5170	186	BQL	739	3.01	15.2
XR-1814_50 SP1	3860	253	BQL	1040	3.22	8.55
XR-1814_51 SP1	4490	189	BQL	680	0.93	1.83
XR-1814_52 SP1	4360	191	BQL	669	BQL	0.82
XR-1814_53 SP1	6240	217	BQL	752	1.34	7.08

Table S4. LA-ICP-MS analysis in ppmw of the studied cultured pearls samples from *P. maxima* (Indonesia).

Samples	^{23}Na	^{24}Mg	^{55}Mn	^{88}Sr	^{137}Ba	^{208}Pb
XR-3200 SP1	4300	79.4	19.8	1070	0.3	0.37
XR-3200 SP2	4510	82.8	24.1	943	0.33	0.18
XR-3200 SP3	4360	75.1	21.5	1060	0.22	0.09
XR-3201 SP1	5000	186	12.2	1100	0.63	0.025
XR-3202 SP1	5620	92.7	19.4	839	0.16	0.17
XR-3203 SP1	4630	137	28.3	1050	0.66	0.095
XR-3204 SP1	4540	155	3.14	1060	0.86	BQL
XR-3205 SP1	4860	78	15.9	903	0.33	0.12
XR-3206 SP1	4780	181	3.72	1050	0.59	0.024
XR-3207 SP1	3640	269	12.2	885	0.32	0.046
XR-3207 SP2	4140	279	14.1	977	0.59	0.046
XR-3207 SP3	3730	249	13.7	944	0.65	0.049
XR-3208 SP1	5670	173	28.9	966	0.73	0.48
XR-3208 SP2	4970	141	31.6	1030	0.7	0.31
XR-3208 SP3	4680	106	28.8	1050	0.37	0.2
XR-3209 SP1	4640	125	4.91	907	0.6	0.031
XR-3210 SP1	4160	197	5.03	1050	0.69	BQL
XR-3211 SP1	4830	112	25.6	986	1.05	0.044
XR-3212 SP1	4960	79.4	13.5	1030	0.32	1.06
XR-3213 SP1	5670	117	34	990	0.2	0.12
XR-3214 SP1	5360	92.4	17.8	1210	0.16	0.055
XR-3215 SP1	5650	199	13.1	1310	0.62	1.27
XR-3216 SP1	5700	73.5	11.4	958	0.19	0.17
XR-3217 SP1	4640	107	11.5	1010	0.29	0.034
XR-3218 SP1	5070	128	37.4	1150	0.83	0.057
XR-3219 SP1	3930	252	13.3	988	1.74	0.13
XR-3219 SP2	3830	278	19	1040	0.67	0.09
XR-3219 SP3	3860	270	15.4	1040	1.29	0.22
XR-3220 SP1	4360	113	8.77	1010	0.5	0.034
XR-3220 SP2	4410	128	10.2	973	0.56	0.035
XR-3220 SP3	4320	117	9.46	988	0.47	0.058
XR-3221 SP1	4200	87	17.6	838	0.2	0.076
XR-3221 SP2	4230	82.8	15.4	856	0.11	0.12
XR-3221 SP3	3940	85.7	14.8	802	0.12	0.073
XR-3222 SP1	4200	71.1	10.7	1070	0.34	0.097
XR-3223 SP1	4700	78.8	27.2	949	0.16	0.19
XR-3223 SP2	4310	73.5	22.2	857	0.19	0.15
XR-3223 SP3	4460	72.1	27	791	0.087	0.14
XR-3224 SP1	4100	78.4	23.7	1110	0.54	0.17
XR-3225 SP1	5070	95.3	33	932	0.26	0.67
XR-3226 SP1	4940	77.8	22.4	1150	0.27	0.18

XR-3227 SP1	4150	91.1	14.9	964	0.29	0.24
XR-3228 SP1	4420	77.8	26.9	944	0.16	0.15
XR-3229 SP1	3570	209	17	1230	0.86	0.58
XR-3230 SP1	4080	110	22.1	1100	0.16	0.1
XR-3231 SP1	4090	85.6	17.6	1050	0.23	0.17
RS-3232 SP1	3620	78.5	2.6	973	0.36	BQL
RS-3233 SP1	3510	100	2.81	1100	0.36	0.04
RS-3234 SP1	3620	85.5	7.29	967	0.16	0.059
RS-3235 SP1	3830	76.8	9.84	968	0.3	0.13
RS-3236 SP1	4940	88.3	18.5	1160	0.24	0.21
RS-3237 SP1	3630	78.4	9.03	987	0.29	0.071
XR-3238 SP1	2440	122	12.9	1070	1.52	0.13
XR-3238 SP2	2440	112	14.8	1110	0.35	0.53
XR-3238 SP3	2490	121	10.5	1140	0.4	0.07
RS-3239 SP1	5060	80.5	8.76	1230	0.51	0.11
XR-3240 SP1	2150	138	5.31	974	0.86	0.11
XR-3240 SP2	2920	131	8.61	1040	1.85	0.44
XR-3240 SP3	2440	148	5.98	1090	0.3	0.092
RS-3241 SP1	4290	178	5.72	1250	1.09	BQL
RS-3242 SP1	5930	104	4.58	1520	0.46	0.087
RS-3243 SP1	4890	147	24.1	1320	0.36	0.18
RS-3244 SP1	4770	125	8.91	1130	0.31	0.088
RS-3245 SP1	4930	101	2.61	1540	0.85	0.088
RS-3246 SP1	5720	173	7.29	1500	1.26	0.091
RS-3247 SP1	5380	83.1	8.74	1170	0.66	0.11
RS-3248 SP1	5630	137	30.1	1300	0.58	0.25
RS-3249 SP1	5930	108	13.2	1160	0.69	0.15
RS-3250 SP1	5160	128	9.45	1160	0.89	0.076
RS-3251 SP1	4820	149	9.18	1120	0.38	0.059
RS-3252 SP1	4730	87.5	10.1	1180	1.15	0.14

Table S5. LA-ICP-MS analysis in ppmw of the studied cultured pearls samples from *P. maxima* (Burma).

Samples	**^{23}Na**	**^{24}Mg**	**^{55}Mn**	**^{88}Sr**	**^{137}Ba**	**^{208}Pb**
RS-4427 SP1	4690	164	7.04	1700	2.39	0.3
RS-4427 SP2	4480	172	8.1	1540	2.02	0.32
RS-4427 SP3	5000	160	7.73	1660	1.85	0.3
XR-4429 SP1	2170	114	30.9	1380	1.24	0.2
XR-4429 SP2	2250	119	34	1420	1.24	0.2
XR-4429 SP3	2130	107	29.6	1250	1.3	0.23
XR-4430 SP1	2580	152	37	840	0.86	0.46
XR-4430 SP2	2790	130	32.3	840	1.77	1.16
XR-4430 SP3	3770	139	45.7	888	1.55	0.74

Table S6. LA-ICP-MS analysis in ppmw of the studied cultured pearls samples from *P. fucata* (Halong Bay, Vietnam).

Samples	^{23}Na	^{24}Mg	^{55}Mn	^{88}Sr	^{137}Ba	^{208}Pb
XR-4937 SP1	4310	334	1.34	1860	1.47	0.74
XR-4937 SP2	4150	306	1.29	1780	1.25	0.7
XR-4937 SP3	4090	303	1.44	1800	1.18	0.67
XR-4938 SP1	4910	841	4.36	888	0.53	0.51
XR-4938 SP2	4710	950	4.38	1020	0.7	0.35
XR-4938 SP3	4950	814	6	1160	1.23	0.42
XR-4939 SP1	2500	244	15.1	1020	0.44	0.93
XR-4939 SP2	2370	237	15.9	1020	0.78	0.87
XR-4939 SP3	2400	256	15	1010	0.36	1.08

Table S7. LA-ICP-MS analysis in ppmw of the studied natural pearls samples from *Margaritifera margaritifera* (Spey river, Scotland).

Samples	^{23}Na	^{24}Mg	^{55}Mn	^{88}Sr	^{137}Ba	^{208}Pb
XR-5075 SP1	1450	23.3	680	774	145	0.092
XR-5075 SP2	1580	26.1	506	711	126	BQL
XR-5075 SP3	1430	23.1	651	654	125	BQL
XR-5076 SP1	1690	16	391	246	23.5	BQL
XR-5076 SP2	1610	17.7	398	234	20.4	BQL
XR-5076 SP3	1630	18.6	397	228	21.9	BQL
XR-5077 SP1	1800	43.2	81.3	843	57.7	BQL
XR-5077 SP2	2050	43.9	75.1	943	60	0.098
XR-5077 SP3	1870	47.8	65.5	835	57.5	BQL
XR-5078 SP1	1780	28.3	447	644	88.9	0.092
XR-5078 SP2	1700	29.1	444	657	93.3	0.25
XR-5078 SP3	1740	29.2	450	622	83.9	0.36
XR-5079 SP1	1720	36.5	376	404	39.1	0.39
XR-5079 SP2	1740	34.8	421	426	59.1	0.098
XR-5079 SP3	1730	34.8	418	440	39.9	0.21
XR-5080 SP1	1610	26.9	311	564	102	0.34
XR-5080 SP2	1520	24.5	290	633	99.4	BQL
XR-5080 SP3	1550	26.4	297	654	112	BQL
XR-5081 SP1	1750	11.1	58	495	92	BQL
XR-5081 SP2	1740	11.5	60.3	463	92.4	BQL
XR-5081 SP3	1730	12.1	62.4	496	95.9	BQL
XR-5082 SP1	1850	25	896	296	37.5	BQL
XR-5082 SP2	1700	23.7	823	293	33.8	BQL
XR-5082 SP3	1840	26.4	774	297	35.6	BQL
XR-5083 SP1	1530	32.8	260	175	15.3	0.23
XR-5083 SP2	1460	31	226	191	17.2	0.21
XR-5083 SP3	1390	27.8	222	189	17.9	0.27
XR-5086 SP1	2010	54.7	465	651	220	BQL

XR-5086 SP2	1910	49	572	626	220	BQL
XR-5086 SP3	2070	60.6	706	652	233	BQL
XR-5087 SP1	1590	38.9	98.9	1030	114	BQL
XR-5087 SP2	1620	40.4	89.9	1030	126	BQL
XR-5087 SP3	1660	38.8	82.5	989	115	BQL
XR-5088 SP1	2030	37.9	236	589	98.6	BQL
XR-5088 SP2	2220	41.7	234	609	92.6	BQL
XR-5088 SP3	2110	35.7	224	575	83.3	0.14

Table S8. LA-ICP-MS analysis in ppmw of the studied natural pearls samples from Unionidae indet. (North American rivers and lakes).

Samples	^{23}Na	^{24}Mg	^{55}Mn	^{88}Sr	^{137}Ba	^{208}Pb
XR-4676 SP1	1530	25.7	619	2660	61.6	0.099
XR-4676 SP2	1110	28	727	2630	65.8	BQL
XR-4676 SP3	1510	28.5	758	2700	80.3	1.03
XR-4677 SP1	1150	24.2	90.2	258	22.7	5.91
XR-4677 SP2	1230	24.1	102	283	23.5	11.6
XR-4677 SP3	1290	24.6	113	297	22.8	9.1
XR-4678 SP1	1260	33	61.3	261	38.4	0.066
XR-4678 SP2	1330	38.1	49.8	260	40.7	0.035
XR-4678 SP3	1210	34.2	39.4	257	44.7	BQL
XR-4679 SP1	1030	81.3	59.3	99.5	13.2	0.16
XR-4679 SP2	1190	68.8	58.8	155	14.3	0.1
XR-4679 SP3	1210	77	69	121	15	0.13
XR-4680 SP1	1370	55.7	75.9	204	106	1.86
XR-4680 SP2	1320	51.5	73.6	200	99.6	1.47
XR-4680 SP1	1350	49.3	81.7	263	102	1.12
XR-4683 SP1	1380	13.7	75.6	96.3	29.4	BQL
XR-4683 SP2	1580	14.6	75.7	106	29.7	0.3
XR-4683 SP3	1500	14	68	100	30	0.031
XR-4684 SP1	1740	15.3	620	360	49	BQL
XR-4684 SP7	703	12.9	326	463	62.2	0.024
XR-4684 SP17	1410	13.2	311	411	64.2	BQL
XR-4687 SP1	1520	70.6	125	395	63.8	0.028
XR-4687 SP2	1400	67.4	116	373	59.1	0.029
XR-4687 SP3	1420	68.9	109	381	56.1	BQL
XR-4688 SP1	1510	41.3	17.6	148	18.1	0.08
XR-4688 SP2	1380	38	17.4	149	18	BQL
XR-4688 SP3	1570	41.6	21.5	156	19.4	0.037
XR-4689 SP1	1210	60.1	23.2	261	40.7	0.034
XR-4689 SP2	1770	58.4	22.4	331	43.2	0.03
XR-4689 SP3	1410	57.9	20.9	343	46.4	0.15
XR-4690 SP1	1270	46.5	223	77.1	38.8	0.2
XR-4690 SP2	1320	50.9	253	74.2	43.1	0.064
XR-4690 SP3	1410	55.3	278	82.8	45.5	0.39

XR-4692 SP1	1740	10.2	1020	386	59.7	0.052
XR-4692 SP2	1620	9.48	954	350	61.4	BQL
XR-4692 SP3	1660	9.21	966	359	59.4	BQL
XR-4693 SP1	1100	33.6	286	75.3	51.9	BQL
XR-4693 SP2	1110	36.4	290	70.6	59.4	BQL
XR-4693 SP3	1040	34.6	297	74.5	55.7	BQL
XR-4694 SP1	1480	21.6	567	409	177	BQL
XR-4694 SP2	1490	23.4	539	382	169	BQL
XR-4694 SP3	1390	20.6	524	384	173	BQL
XR-4695 SP1	1720	35.2	615	247	104	0.035
XR-4695 SP2	1600	33.3	619	252	111	0.053
XR-4695 SP3	1750	34	621	249	106	0.11
XR-4696 SP1	1340	16.6	752	341	144	BQL
XR-4696 SP2	1390	19	685	333	144	BQL
XR-4696 SP3	1410	18.5	871	360	148	BQL
XR-4697 SP1	2300	10.8	942	448	66	BQL
XR-4697 SP2	2300	10.4	931	431	63.1	BQL
XR-4697 SP3	2260	10.4	986	419	68.4	BQL
XR-4698 SP1	1500	34.3	32.7	75.1	50.4	BQL
XR-4698 SP2	1460	40.8	30.8	80.6	47.6	0.069
XR-4698 SP3	1600	32.1	32.1	78.5	52.7	BQL
XR-4699 SP1	1680	31	595	250	84.8	BQL
XR-4699 SP2	1750	30.3	690	225	79.5	BQL
XR-4699 SP3	1610	29.9	619	219	74.9	BQL
XR-4700 SP1	1840	40.2	593	211	71.8	BQL
XR-4700 SP2	1710	37	549	209	69.3	BQL
XR-4700 SP3	1740	36.3	639	211	81.2	BQL
XR-4701 SP1	1670	41.1	427	225	73.6	BQL
XR-4701 SP2	1680	39.6	428	222	74.8	BQL
XR-4701 SP3	1680	43.2	439	220	72.7	BQL
XR-4702 SP1	1700	26.4	567	266	89.6	BQL
XR-4702 SP2	1610	25.4	500	271	101	BQL
XR-4702 SP3	1700	27.1	637	276	108	BQL
XR-4703 SP1	1550	26.3	497	294	113	0.041
XR-4703 SP2	1490	23	459	258	109	BQL
XR-4703 SP3	1490	23.1	473	267	106	BQL
XR-4704 SP1	1590	20.3	529	306	110	BQL
XR-4704 SP2	1540	19.3	492	282	107	BQL
XR-4704 SP3	1660	19.9	501	282	102	BQL
XR-4705 SP1	1660	41.4	548	212	74.7	BQL
XR-4705 SP2	1750	41.2	535	214	69.7	0.05
XR-4705 SP3	1750	40.3	525	211	66.3	BQL
XR–4859 SP1	1760	41.8	109	1570	249	BQL
XR–4859 SP2	1640	35.5	96.8	1500	224	BQL

XR–4859 SP3	1600	37.8	112	1390	218	0.056

Table S9. LA-ICP-MS analysis in ppmw of the studied cultured pearls samples from *Hyriopsis* sp. (Chinese rivers and lakes).

Samples	^{23}Na	^{24}Mg	^{55}Mn	^{88}Sr	^{137}Ba	^{208}Pb
XR-4706 SP1	2410	29.7	972	612	46	0.13
XR-4706 SP2	2370	27.4	973	632	43.3	0.35
XR-4706 SP3	2450	25.3	1040	624	44.5	0.25
XR-4707 SP1	1740	14	997	370	23.8	0.033
XR-4707 SP2	2110	19.3	1230	458	28.4	0.033
XR-4707 SP3	1960	17.7	1120	432	30.2	BQL
XR-4708 SP1	1910	16.6	1350	488	50.9	BQL
XR-4708 SP2	1910	18.1	1440	493	52.8	BQL
XR-4708 SP3	1800	14.9	1210	466	52.2	BQL
XR-4710 SP1	1920	17.2	1360	473	52.3	BQL
XR-4710 SP2	1930	17.5	1420	564	59.8	BQL
XR-4710 SP3	1690	18.5	1200	467	48.2	BQL
XR-4711 SP1	1260	10.6	602	329	49.6	BQL
XR-4711 SP2	1700	36.2	590	324	50.2	BQL
XR-4711 SP3	1700	11.1	597	284	43.3	0.023
XR-4712 SP1	2110	34.9	1040	272	14.9	BQL
XR-4712 SP2	2210	30.4	1100	286	14.5	0.23
XR-4712 SP3	2020	31.3	1040	268	13.6	BQL
XR-4713 SP1	2020	19.2	822	318	61.5	BQL
XR-4713 SP2	1800	19.6	898	322	65.9	BQL
XR-4713 SP3	1860	21.6	910	319	66.6	BQL
XR-4714 SP1	1360	72.2	1170	348	43.6	BQL
XR-4714 SP2	1560	76.7	1240	378	55.7	BQL
XR-4714 SP3	1580	76.9	1290	405	47.2	0.066
XR-4715 SP1	2130	12.7	557	378	63.6	0.27
XR-4715 SP2	2030	10.8	529	411	62.4	BQL
XR-4715 SP3	2020	11.7	521	364	55.3	BQL
XR-4716 SP1	1790	29.5	391	358	116	BQL
XR-4716 SP2	1860	48.7	408	378	121	BQL
XR-4716 SP3	1990	32.5	406	388	128	BQL
XR-4717 SP1	2430	55.1	551	347	70.6	BQL
XR-4717 SP2	2350	58.4	559	353	67.8	BQL
XR-4717 SP3	2250	55.1	588	351	77.2	BQL
XR-4719 SP1	1650	11.6	52.3	313	13.7	BQL
XR-4719 SP2	1840	12.8	55.7	334	15	BQL
XR-4719 SP3	1890	10.8	45	299	14.2	BQL
XR-4720 SP1	1910	26.8	1340	454	63.1	BQL
XR-4720 SP2	1870	30.9	1270	403	61.3	0.16
XR-4720 SP3	1830	27.3	1280	380	55.3	BQL
XR-4721 SP1	1510	6.02	64.1	352	28.4	0.026

XR-4721 SP2	1490	5.58	58.2	448	33.4	BQL
XR-4721 SP3	1690	7.07	53.2	397	32.6	BQL
XR-4722 SP1	1930	14	268	258	20.1	0.15
XR-4722 SP2	2120	14.1	241	241	21.3	0.18
XR-4722 SP3	2090	14.8	233	282	19.6	0.23
XR-4724 SP1	1520	28.8	1190	690	169	BQL
XR-4724 SP2	1710	30.4	1140	641	169	BQL
XR-4724 SP3	1820	28.1	1080	659	155	BQL
XR-4725 SP1	1590	16.2	719	442	74.3	0.02
XR-4725 SP2	1520	14.4	784	423	65.5	BQL
XR-4725 SP3	1690	17.1	731	468	69.4	0.1