

Table S1. Major element composition of the ZMT04 muscovite by EPMA (wt.%)

Point	F	Cl	MgO	TiO ₂	MnO	P ₂ O ₅	K ₂ O	FeO	Na ₂ O	Al ₂ O ₃	SiO ₂	CaO	Total	K ₂ O average	2sd	2rsd (%)	K ₂ O Total average	2sd of Total data	2rsd of Total data (%)
D.L. (3σ) ¹	#####	#####	0.0273	0.0255	0.0333	0.0276	0.0312	0.0645	0.0264	0.0273	0.0405	0.0093							
grain1-1	2.303	\ ²	0.756	0.422	\	\	10.262	3.547	0.818	30.989	45.669	\	94.766	10.35	0.20	1.93	10.38	0.22	2.12
grain1-2	2.228	\	0.723	0.423	0.055	0.033	10.322	3.719	0.836	31.155	45.960	\	95.454						
grain1-3	2.254	\	0.744	0.420	\	\	10.212	3.816	0.866	31.276	46.109	\	95.697						
grain1-4	2.184	\	0.744	0.450	\	\	10.374	3.716	0.849	30.994	45.980	\	95.291						
grain1-5	2.200	\	0.751	0.417	\	\	10.352	3.896	0.825	31.009	45.906	\	95.356						
grain1-6	2.203	\	0.723	0.436	\	\	10.305	3.878	0.878	31.415	46.760	\	96.598						
grain1-7	2.266	\	0.752	0.433	0.034	0.043	10.479	3.986	0.869	31.047	45.585	\	95.494						
grain1-8	2.221	\	0.766	0.428	0.046	\	10.293	3.847	0.844	31.160	46.189	\	95.794						
grain1-9	2.222	\	0.737	0.399	0.044	\	10.264	3.704	0.764	30.531	45.124	\	93.789						
grain1-10	2.144	\	0.708	0.416	0.034	0.028	10.221	3.858	0.859	31.368	46.245	\	95.881						
grain1-11	2.182	\	0.739	0.433	\	\	10.195	3.750	0.881	31.507	46.302	\	95.989						
grain1-12	2.077	\	0.754	0.431	\	\	10.408	3.800	0.865	31.358	46.435	\	96.128						
grain1-13	2.204	\	0.746	0.430	0.043	\	10.238	3.832	0.804	31.381	46.468	\	96.146						
grain1-14	2.231	\	0.694	0.426	\	\	10.481	3.667	0.800	31.341	46.610	\	96.250						
grain1-15	2.157	\	0.729	0.453	0.036	0.029	10.126	3.810	0.874	31.464	46.421	\	96.099						
grain1-16	2.176	\	0.764	0.436	\	\	10.427	3.833	0.844	31.616	46.283	\	96.379						
grain1-17	2.137	\	0.755	0.456	\	\	10.482	3.845	0.861	31.627	46.450	\	96.613						
grain1-18	2.208	\	0.715	0.430	0.037	\	10.178	3.686	0.839	31.537	46.553	\	96.183						
grain1-19	2.191	\	0.720	0.365	\	\	10.426	3.728	0.802	31.597	46.336	\	96.165						
grain1-20	2.216	\	0.696	0.421	0.041	0.032	10.367	3.718	0.894	31.612	46.347	\	96.344						
grain1-21	2.167	\	0.759	0.418	\	\	10.419	3.614	0.838	31.491	46.441	\	96.147						
grain1-22	2.144	\	0.722	0.409	\	\	10.386	3.548	0.807	31.399	46.461	\	95.876						
grain1-23	2.174	\	0.728	0.438	0.033	\	10.403	3.866	0.889	31.404	46.531	\	96.466						
grain1-24	2.190	\	0.751	0.423	0.039	\	10.358	3.491	0.813	31.442	46.388	\	95.895						
grain1-25	2.134	\	0.743	0.378	0.045	\	10.336	3.789	0.830	31.356	46.361	\	95.972						
grain1-26	2.204	\	0.788	0.438	0.046	\	10.156	3.745	0.821	31.412	46.418	\	96.028						
grain1-27	2.120	\	0.778	0.449	0.045	\	10.324	3.781	0.838	31.491	46.355	\	96.181						
grain1-28	2.224	\	0.688	0.412	0.036	\	10.210	3.740	0.849	31.426	46.506	\	96.091						
grain1-29	2.260	\	0.716	0.385	\	\	10.475	3.641	0.873	31.274	46.558	\	96.182						
grain1-30	2.209	\	0.743	0.434	0.048	\	10.510	3.707	0.859	31.556	46.197	\	96.263						
grain1-31	2.169	\	0.723	0.413	\	0.032	10.474	3.879	0.823	31.719	46.413	\	96.645						
grain1-32	2.205	\	0.785	0.427	\	\	10.407	3.903	0.823	31.449	46.303	\	96.302						
grain1-33	2.158	\	0.747	0.426	\	\	10.385	3.684	0.823	31.397	46.496	\	96.116						
grain1-34	2.149	\	0.729	0.432	0.037	\	10.461	3.847	0.864	31.546	46.300	\	96.365						
grain1-35	2.208	\	0.757	0.445	0.040	0.030	10.405	3.558	0.910	31.644	46.335	\	96.332						
grain1-36	2.188	\	0.763	0.431	\	\	10.482	3.728	0.905	31.589	46.447	\	96.533						
grain1-37	2.182	\	0.719	0.446	\	0.030	10.289	3.599	0.833	31.570	46.625	\	96.293						
grain1-38	2.211	\	0.714	0.403	\	\	10.313	3.692	0.849	31.609	46.549	\	96.340						
grain1-39	2.219	\	0.724	0.395	0.043	\	10.339	3.791	0.876	31.764	46.895	\	97.046						
grain1-40	2.215	\	0.788	0.409	\	\	10.288	3.597	0.842	31.702	46.819	\	96.660						
grain2-1	2.257	\	0.742	0.411	\	0.029	10.402	3.874	0.816	31.268	45.926	\	95.725	10.40	0.22	2.12			
grain2-2	2.299	\	0.763	0.433	\	\	10.523	3.973	0.799	31.141	46.095	\	96.026						
grain2-3	2.226	\	0.752	0.438	\	\	10.346	3.846	0.828	31.214	46.141	\	95.791						
grain2-4	2.351	\	0.780	0.422	0.046	\	10.362	3.970	0.842	31.206	46.235	\	96.214						

grain2-5	2.341	\	0.702	0.423	\	\	10.337	3.832	0.875	31.341	46.265	\	96.116			
grain2-6	2.298	\	0.784	0.427	\	\	10.264	3.827	0.838	31.251	46.176	\	95.865			
grain2-7	2.238	\	0.744	0.431	\	\	10.346	3.846	0.830	31.274	46.043	\	95.752			
grain2-8	2.443	\	0.757	0.433	0.042	\	10.496	3.673	0.829	31.606	46.226	\	96.505			
grain2-9	2.232	\	0.766	0.418	\	0.041	10.407	3.859	0.860	31.552	46.383	\	96.518			
grain2-10	2.234	\	0.684	0.443	\	\	10.245	3.876	0.867	31.545	46.115	\	96.009			
grain2-11	2.322	\	0.750	0.445	\	\	10.474	3.876	0.879	31.442	46.327	\	96.515			
grain2-12	2.329	\	0.720	0.440	\	\	10.484	3.874	0.779	31.649	46.136	\	96.411			
grain2-13	2.229	\	0.768	0.443	\	\	10.233	3.944	0.854	31.591	46.155	\	96.217			
grain2-14	2.335	\	0.752	0.453	\	\	10.368	3.822	0.904	31.510	46.248	\	96.392			
grain2-15	2.301	\	0.755	0.436	\	0.029	10.411	3.651	0.856	31.602	46.009	\	96.050			
grain2-16	2.242	\	0.746	0.432	\	\	10.303	3.960	0.807	31.492	46.231	\	96.213			
grain2-17	2.264	\	0.790	0.438	\	0.031	10.623	3.805	0.888	31.637	46.493	\	96.969			
grain2-18	2.364	\	0.729	0.409	\	0.038	10.536	3.927	0.876	31.654	46.663	\	97.196			
grain2-19	2.243	\	0.762	0.425	\	0.030	10.361	3.701	0.781	31.587	46.458	\	96.348			
grain2-20	2.211	\	0.716	0.437	\	\	10.316	3.897	0.837	31.655	46.353	\	96.422			
grain2-21	2.271	\	0.762	0.448	0.035	\	10.355	3.851	0.836	31.715	46.427	\	96.700			
grain2-22	2.267	\	0.748	0.427	0.040	\	10.225	3.804	0.838	31.557	46.695	\	96.601			
grain2-23	2.198	\	0.719	0.401	\	0.045	10.369	3.837	0.890	31.436	46.303	\	96.198			
grain2-24	2.216	\	0.700	0.439	\	\	10.461	3.319	0.853	31.371	46.294	\	95.653			
grain2-25	2.258	\	0.710	0.438	\	\	10.499	3.863	0.894	31.521	46.545	\	96.728			
grain2-26	2.175	\	0.748	0.435	\	0.029	10.549	3.909	0.867	31.547	46.229	\	96.488			
grain2-27	2.223	\	0.713	0.431	0.044	\	10.655	3.777	0.809	31.694	46.488	\	96.834			
grain2-28	2.279	\	0.705	0.423	\	\	10.281	3.779	0.828	31.665	46.403	\	96.363			
grain2-29	2.267	\	0.743	0.402	\	\	10.470	3.892	0.873	31.554	46.572	\	96.773			
grain2-30	2.277	\	0.793	0.420	\	\	10.383	3.796	0.879	31.557	46.413	\	96.518			
grain2-31	2.205	\	0.720	0.418	\	0.030	10.469	3.599	0.863	31.567	46.656	\	96.527			
grain2-32	2.247	\	0.725	0.428	\	\	10.400	3.836	0.880	31.659	46.725	\	96.900			
grain3-1-1	2.174	\	0.739	0.411	\	\	10.484	3.890	0.845	31.638	47.288	\	97.469	10.40	0.17	1.63
grain3-1-2	2.202	\	0.809	0.391	0.037	\	10.356	3.749	0.849	31.484	46.964	\	96.841			
grain3-1-3	2.100	\	0.805	0.410	\	\	10.473	3.722	0.846	31.430	46.712	\	96.498			
grain3-1-4	2.118	\	0.772	0.380	\	\	10.299	3.846	0.841	31.086	46.308	\	95.650			
grain3-1-5	2.173	\	0.775	0.402	0.039	\	10.461	4.031	0.888	31.491	46.721	\	96.981			
grain3-1-6	2.101	\	0.786	0.383	\	\	10.284	4.013	0.782	31.399	46.507	\	96.255			
grain3-1-7	2.221	\	0.802	0.405	\	\	10.544	3.853	0.840	31.421	46.892	\	96.978			
grain3-1-8	2.181	\	0.806	0.427	\	\	10.362	3.912	0.777	31.272	46.844	\	96.581			
grain3-1-9	2.175	\	0.806	0.371	\	\	10.408	3.883	0.846	31.332	46.760	\	96.581			
grain3-1-10	2.213	\	0.827	0.404	\	\	10.457	3.921	0.853	31.491	46.669	\	96.835			
grain3-1-11	2.150	\	0.769	0.421	\	\	10.427	3.837	0.833	31.528	46.761	\	96.726			
grain3-1-12	2.173	\	0.832	0.374	\	\	10.438	3.987	0.842	31.707	46.793	\	97.146			
grain3-1-13	2.167	\	0.793	0.426	\	\	10.443	3.933	0.806	31.419	46.995	\	96.982			
grain3-1-14	2.147	\	0.812	0.397	0.033	\	10.499	3.805	0.854	31.451	46.817	\	96.815			
grain3-1-15	2.048	\	0.792	0.403	0.047	\	10.343	3.782	0.813	31.782	47.223	\	97.233			
grain3-1-16	2.159	\	0.749	0.431	0.034	\	10.417	3.892	0.864	31.329	46.894	\	96.769			
grain3-1-17	2.184	\	0.801	0.410	\	0.030	10.415	3.928	0.847	31.406	46.859	\	96.880			
grain3-1-18	2.202	\	0.787	0.393	\	\	10.474	4.079	0.850	31.647	46.934	\	97.366			
grain3-1-19	2.186	\	0.797	0.400	\	0.031	10.388	3.880	0.815	31.298	46.714	\	96.509			
grain3-1-20	2.125	\	0.777	0.396	\	\	10.247	3.913	0.830	31.477	47.085	\	96.850			

grain3-1-21	2.121	\	0.779	0.404	\	\	10.218	4.008	0.836	31.410	46.735	\	96.511				
grain3-1-22	2.116	\	0.814	0.431	\	\	10.407	3.776	0.790	31.286	46.929	\	96.549				
grain3-1-23	2.219	\	0.812	0.399	0.033	0.028	10.460	3.999	0.872	31.346	46.888	\	97.056				
grain3-1-24	2.162	\	0.773	0.416	\	\	10.426	3.938	0.828	31.391	47.178	\	97.112				
grain3-1-25	2.150	\	0.757	0.418	0.035	\	10.317	4.132	0.898	31.483	46.970	\	97.160				
grain3-1-26	2.138	\	0.789	0.410	0.043	\	10.319	3.861	0.838	31.521	47.098	\	97.017				
grain3-1-27	2.272	\	0.847	0.402	\	\	10.464	4.059	0.843	31.375	46.989	\	97.251				
grain3-1-28	2.124	\	0.807	0.393	0.040	\	10.551	4.093	0.813	31.287	47.040	\	97.148				
grain3-1-29	2.112	\	0.847	0.374	\	0.035	10.336	4.001	0.818	31.432	46.889	\	96.844				
grain3-1-30	2.194	\	0.721	0.410	\	\	10.469	3.940	0.824	31.263	46.880	\	96.701				
grain3-1-31	2.120	\	0.803	0.412	\	\	10.469	4.096	0.836	31.522	46.651	\	96.909				
grain3-1-32	2.180	\	0.849	0.395	\	\	10.326	4.115	0.829	31.443	46.411	\	96.548				
grain3-1-33	2.191	\	0.792	0.422	0.046	\	10.417	3.926	0.899	31.594	47.197	\	97.484				
grain3-1-34	2.158	\	0.823	0.402	0.039	\	10.511	3.825	0.788	31.185	46.471	\	96.202				
grain3-1-35	2.187	\	0.789	0.404	\	\	10.422	3.914	0.845	31.228	46.644	\	96.433				
grain3-1-36	2.088	\	0.819	0.374	\	\	10.395	3.935	0.853	31.392	46.356	\	96.212				
grain3-1-37	2.145	\	0.808	0.378	0.033	\	10.488	3.814	0.827	31.134	46.498	\	96.125				
grain3-1-38	2.118	\	0.783	0.404	\	\	10.319	3.880	0.815	31.216	46.915	\	96.450				
grain3-1-39	2.217	\	0.798	0.386	\	\	10.468	3.860	0.828	31.278	46.284	\	96.119				
grain3-1-40	2.249	\	0.790	0.413	\	\	10.276	3.744	0.872	31.153	46.379	\	95.876				
grain3-1-41	2.349	\	0.799	0.402	0.038	\	10.223	3.979	0.825	30.964	46.150	\	95.729				
grain3-1-42	2.029	\	0.799	0.392	0.051	\	10.402	4.029	0.876	31.555	47.059	\	97.192				
grain3-2-1	2.316	\	0.757	0.393	0.040	\	10.354	3.953	0.783	30.835	45.760	\	95.191	10.37	0.25	2.41	
grain3-2-2	2.247	\	0.785	0.402	\	\	10.392	3.913	0.826	30.710	46.039	\	95.314				
grain3-2-3	2.382	\	0.799	0.401	0.034	0.030	10.156	3.902	0.761	29.928	44.332	\	92.725				
grain3-2-4	2.270	\	0.795	0.390	\	\	10.379	3.964	0.752	30.334	45.365	\	94.249				
grain3-2-5	2.318	\	0.811	0.410	\	\	10.444	3.886	0.760	30.555	45.545	\	94.729				
grain3-2-6	2.189	\	0.826	0.430	\	\	10.331	3.789	0.850	30.785	45.832	\	95.032				
grain3-2-7	2.218	\	0.815	0.384	\	\	10.523	4.031	0.841	31.014	46.298	\	96.124				
grain3-2-8	2.166	\	0.846	0.378	0.061	\	10.429	3.937	0.832	31.275	46.456	\	96.380				
grain3-2-9	2.233	\	0.834	0.388	\	\	10.450	3.750	0.844	31.181	46.544	\	96.224				
grain3-2-10	2.256	\	0.813	0.399	\	\	10.398	3.857	0.836	31.194	46.333	\	96.086				
grain3-2-11	2.206	\	0.832	0.397	\	\	10.491	3.801	0.820	31.212	46.825	\	96.584				
grain3-2-12	2.280	\	0.796	0.410	\	\	10.410	3.711	0.790	31.256	46.412	\	96.065				
grain3-2-13	2.187	\	0.809	0.393	0.037	\	10.465	4.028	0.874	31.545	47.011	\	97.349				
grain3-2-14	2.216	\	0.834	0.397	\	\	10.446	4.103	0.820	31.241	47.065	\	97.122				
grain3-2-15	2.182	\	0.732	0.391	\	0.032	10.491	3.813	0.884	31.385	46.830	\	96.740				
grain3-2-16	2.154	\	0.782	0.365	\	\	10.444	4.137	0.789	31.599	46.886	\	97.156				
grain3-2-17	2.240	\	0.806	0.410	0.035	\	10.251	3.944	0.829	31.598	46.965	\	97.078				
grain3-2-18	2.146	\	0.834	0.402	\	\	10.212	3.880	0.867	31.156	46.697	\	96.194				
grain3-2-19	2.175	\	0.806	0.406	0.050	\	10.515	3.793	0.832	31.434	47.055	\	97.066				
grain3-2-20	2.117	\	0.800	0.416	\	\	10.235	3.975	0.831	31.350	46.621	\	96.345				
grain3-2-21	2.217	\	0.801	0.432	0.033	\	10.118	3.815	0.809	31.434	46.930	\	96.589				
grain3-2-22	2.184	\	0.793	0.335	\	\	10.515	3.879	0.818	31.195	46.225	\	95.944				
grain3-2-23	2.186	\	0.776	0.401	\	\	10.436	3.866	0.810	31.290	46.547	\	96.312				
grain3-2-24	2.027	\	0.778	0.392	0.038	\	10.434	3.883	0.827	31.348	46.945	\	96.672				
grain3-2-25	2.078	\	0.792	0.364	\	\	10.437	3.802	0.835	31.646	46.918	\	96.872				
grain3-2-26	2.168	\	0.775	0.400	0.039	\	10.372	3.830	0.824	31.169	46.894	\	96.471				

grain3-2-27	2.171	\	0.762	0.428	0.051	\	10.289	4.007	0.805	31.367	46.578	\	96.458			
grain3-2-28	2.199	\	0.815	0.416	\	\	10.301	3.851	0.807	31.357	46.972	\	96.718			
grain3-2-29	2.225	\	0.777	0.416	\	0.030	10.385	4.030	0.857	31.144	46.625	\	96.489			
grain3-2-30	2.140	\	0.787	0.436	0.047	\	10.248	4.085	0.814	31.324	46.407	\	96.288			
grain3-2-31	2.187	\	0.768	0.415	\	\	10.596	4.039	0.859	31.182	46.645	\	96.691			
grain3-2-32	1.896	\	0.745	0.407	\	\	10.205	3.882	0.913	31.739	47.016	\	96.803			
grain3-2-33	2.073	\	0.749	0.303	0.041	\	10.254	3.934	0.829	30.662	46.027	\	94.872			
grain3-2-34	2.169	\	0.756	0.396	\	\	10.492	3.830	0.776	31.487	47.143	\	97.049			
grain3-2-35	2.057	\	0.756	0.411	\	\	10.485	3.978	0.856	31.634	46.962	\	97.139			
grain3-2-36	2.101	\	0.772	0.415	0.042	\	10.207	3.837	0.816	31.319	46.309	\	95.818			
grain3-2-37	2.130	\	0.760	0.412	\	\	10.415	3.697	0.837	31.244	46.480	\	95.975			
grain3-2-38	2.117	\	0.764	0.418	\	\	10.401	3.754	0.813	31.250	46.628	\	96.145			
grain3-2-39	2.233	\	0.856	0.418	\	\	10.192	3.889	0.805	31.001	46.324	\	95.718			
grain3-2-40	2.087	\	0.863	0.415	0.034	\	10.394	4.057	0.868	31.280	46.679	\	96.677			
grain3-2-41	2.227	\	0.827	0.418	\	\	10.178	4.017	0.844	31.364	46.645	\	96.520			
grain3-2-42	2.282	\	0.792	0.395	\	\	10.512	3.955	0.826	31.401	46.844	\	97.007			
grain3-2-43	2.247	\	0.817	0.411	\	\	10.081	4.007	0.816	31.289	47.008	\	96.676			
grain3-2-44	2.211	\	0.769	0.407	0.050	\	10.493	3.984	0.862	31.529	46.764	\	97.069			
grain3-2-45	2.055	\	0.757	0.393	\	\	10.286	4.081	0.828	31.495	46.607	\	96.502			
grain3-2-46	2.189	\	0.809	0.434	0.042	\	10.527	4.149	0.907	31.836	47.399	\	98.292			
grain3-3-1	2.245	\	0.810	0.405	\	\	10.278	3.796	0.790	30.623	46.234	\	95.181	10.35	0.22	2.13
grain3-3-2	2.278	\	0.786	0.409	\	\	10.305	3.867	0.865	30.900	45.992	\	95.402			
grain3-3-3	2.253	\	0.808	0.391	\	\	10.379	4.013	0.818	30.808	45.756	\	95.226			
grain3-3-4	2.222	\	0.802	0.402	\	\	10.262	3.830	0.816	30.982	46.124	\	95.440			
grain3-3-5	2.174	\	0.791	0.403	\	\	10.241	4.058	0.837	30.807	45.835	\	95.146			
grain3-3-6	2.201	\	0.785	0.301	0.039	\	10.314	3.944	0.798	30.958	45.987	\	95.327			
grain3-3-7	2.216	\	0.798	0.415	0.035	\	10.351	3.920	0.834	31.176	46.375	\	96.120			
grain3-3-8	2.198	\	0.803	0.400	0.045	0.041	10.414	4.104	0.854	31.311	46.833	\	97.003			
grain3-3-9	2.170	\	0.783	0.396	0.068	\	10.337	4.063	0.894	31.243	46.399	\	96.353			
grain3-3-10	2.103	\	0.816	0.406	0.038	\	10.104	3.990	0.809	31.561	46.634	\	96.461			
grain3-3-11	2.181	\	0.792	0.414	\	\	10.228	3.999	0.834	31.063	46.640	\	96.151			
grain3-3-12	2.151	\	0.807	0.398	0.045	\	10.321	4.172	0.813	31.193	46.493	\	96.393			
grain3-3-13	2.234	\	0.841	0.398	\	\	10.509	3.944	0.804	31.071	46.331	\	96.132			
grain3-3-14	2.242	\	0.821	0.405	0.054	\	10.421	3.927	0.828	31.348	46.534	\	96.580			
grain3-3-15	2.170	\	0.763	0.396	0.034	\	10.453	3.923	0.813	31.262	46.354	\	96.168			
grain3-3-16	2.306	\	0.799	0.389	\	\	10.188	3.636	0.843	30.984	46.161	\	95.306			
grain3-3-17	2.239	\	0.808	0.395	\	\	10.391	3.798	0.865	31.428	46.816	\	96.740			
grain3-3-18	2.213	\	0.816	0.390	0.033	\	10.366	4.095	0.838	31.242	46.291	\	96.284			
grain3-3-19	2.177	\	0.823	0.404	0.034	\	10.277	4.024	0.901	30.988	46.556	\	96.184			
grain3-3-20	2.060	\	0.799	0.406	0.034	\	10.327	3.854	0.858	31.220	46.503	\	96.061			
grain3-3-21	2.097	\	0.850	0.409	\	\	10.474	3.988	0.836	31.535	46.559	\	96.748			
grain3-3-22	2.191	\	0.755	0.398	0.040	\	10.334	3.976	0.831	31.331	46.515	\	96.371			
grain3-3-23	2.123	\	0.753	0.413	\	\	10.441	4.169	0.863	31.317	46.599	\	96.678			
grain3-3-24	2.186	\	0.783	0.379	\	\	10.627	4.056	0.823	31.417	46.449	\	96.720			
grain3-3-25	2.208	\	0.804	0.407	\	\	10.476	3.968	0.804	31.141	46.737	\	96.545			
grain3-3-26	2.078	\	0.761	0.383	0.045	\	10.324	3.963	0.880	31.102	46.610	\	96.146			
grain3-3-27	2.056	\	0.756	0.400	\	\	10.147	4.033	0.847	31.541	47.015	\	96.795			
grain3-3-28	2.146	\	0.766	0.415	0.036	\	10.202	3.977	0.851	31.378	47.090	\	96.861			

grain3-3-29	2.153	\	0.803	0.391	0.033	\	10.145	3.654	0.824	31.431	46.876	\	96.310			
grain3-3-30	2.320	\	0.810	0.397	0.051	\	10.354	3.972	0.797	31.291	46.382	\	96.374			
grain3-3-31	2.140	\	0.800	0.421	\	0.036	10.281	4.065	0.854	31.363	46.723	\	96.683			
grain3-3-32	2.204	\	0.793	0.402	0.037	\	10.552	3.745	0.866	31.188	46.716	\	96.503			
grain3-3-33	2.018	\	0.782	0.361	0.036	0.032	10.289	3.623	0.811	31.441	46.756	\	96.149			
grain3-3-34	2.181	\	0.790	0.403	\	\	10.369	4.002	0.819	31.317	46.890	\	96.771			
grain3-3-35	2.060	\	0.795	0.388	0.060	\	10.387	4.128	0.826	31.596	46.677	\	96.917			
grain3-3-36	2.093	\	0.798	0.391	0.049	\	10.392	4.116	0.866	31.500	46.739	\	96.944			
grain3-3-37	2.203	\	0.814	0.408	\	\	10.336	3.895	0.871	31.357	46.609	\	96.493			
grain3-3-38	2.173	\	0.817	0.397	\	\	10.342	4.073	0.801	31.387	46.528	\	96.518			
grain3-3-39	2.185	\	0.816	0.391	\	\	10.372	3.770	0.856	31.448	46.690	\	96.528			
grain3-3-40	2.262	\	0.787	0.416	0.043	\	10.306	3.967	0.907	31.313	46.542	\	96.543			
grain3-3-41	2.229	\	0.825	0.409	\	\	10.416	4.035	0.797	31.505	46.300	\	96.516			
grain3-3-42	2.141	\	0.801	0.403	0.037	\	10.324	3.771	0.836	31.477	46.478	\	96.268			
grain3-3-43	2.256	\	0.805	0.394	0.049	\	10.529	3.740	0.807	31.407	46.413	\	96.400			
grain3-3-44	2.184	\	0.796	0.371	0.045	\	10.400	3.748	0.845	31.142	46.468	\	95.999			
grain4-1	1.874	\	0.685	0.490	\	\	10.188	3.715	0.792	31.098	45.253	\	94.095	10.40	0.25	2.40
grain4-2	1.907	\	0.617	0.547	0.034	\	10.334	3.744	0.780	31.629	45.933	\	95.525			
grain4-3	1.912	\	0.650	0.524	\	\	10.391	3.851	0.895	31.602	46.270	\	96.095			
grain4-4	1.739	\	0.616	0.500	0.040	\	10.504	3.466	0.854	30.897	45.401	\	94.017			
grain4-5	1.936	\	0.636	0.525	\	\	10.696	3.624	0.807	31.552	45.754	\	95.530			
grain4-6	1.852	\	0.612	0.515	\	\	10.358	3.562	0.751	31.542	46.258	\	95.450			
grain4-7	1.865	\	0.592	0.534	0.037	\	10.381	3.550	0.847	31.974	46.258	\	96.038			
grain4-8	1.926	\	0.581	0.502	\	\	10.268	3.292	0.876	31.702	46.338	\	95.485			
grain4-9	1.970	\	0.640	0.547	\	\	10.448	3.608	0.854	32.055	46.974	\	97.096			
grain4-10	1.836	\	0.633	0.558	\	\	10.295	3.663	0.819	32.112	46.715	\	96.631			
grain4-11	1.972	\	0.630	0.511	\	0.030	10.430	3.647	0.823	31.771	46.509	\	96.323			
grain4-12	2.004	\	0.655	0.447	\	\	10.284	3.456	0.880	31.646	46.476	\	95.848			
grain4-13	1.951	\	0.612	0.524	\	\	10.356	3.613	0.842	31.932	46.532	\	96.362			
grain4-14	2.011	\	0.636	0.519	\	\	10.424	3.746	0.848	31.973	46.538	\	96.695			
grain4-15	1.875	\	0.665	0.506	\	\	10.191	3.741	0.877	31.656	46.776	\	96.287			
grain4-16	1.956	\	0.610	0.513	0.035	\	10.554	3.662	0.864	31.849	46.592	\	96.635			
grain4-17	1.924	\	0.650	0.532	\	\	10.463	3.674	0.813	32.092	46.732	\	96.880			
grain4-18	1.898	\	0.654	0.545	\	\	10.351	3.729	0.899	32.089	46.661	\	96.826			
grain4-19	1.934	\	0.692	0.546	0.033	0.031	10.405	3.545	0.802	31.949	46.323	\	96.260			
grain4-20	1.905	\	0.627	0.505	\	\	10.501	3.531	0.887	31.887	46.475	\	96.318			
grain4-21	1.982	\	0.617	0.529	\	\	10.451	3.671	0.878	32.174	46.707	\	97.009			
grain4-22	1.881	\	0.660	0.526	\	0.035	10.332	3.664	0.902	32.241	46.691	\	96.932			
grain4-23	1.963	\	0.609	0.487	\	\	10.614	3.649	0.876	32.010	47.058	\	97.266			

Note:

¹ D.L.(3σ): 3σ limit of detection.

² \: Result lower than 3σ limit of detection.