

附表 S1 基于全波段数据的五种建模算法结合不同预处理策略对茶树叶片成分的预测性能与最佳参数

Table S1. Prediction performance and optimal parameters of five modeling algorithms combined with different preprocessing strategies for tea leaf components based on full-spectrum data

成分 Component	模型 Models	预处理方法 Preprocessing	校正集决定系数 R_c^2	预测集决定系数 R_p^2	校正均方根误差 RMSEC	预测均方根误差 RMSEP	相对分析误差 RPD	最佳参数 Best Parameters
C	PLSR	RAW	0.587	0.601	0.106	0.117	1.583	19
		SG	0.581	0.594	0.107	0.118	1.569	20
		SNV	0.641	0.562	0.099	0.123	1.511	20
		SG+SNV+D1S T	0.634	0.577	0.100	0.121	1.537	9
	SVR	RAW	0.507	0.421	0.116	0.141	1.314	C=100, g=0.001, eps=0.2
		SG	0.507	0.420	0.116	0.141	1.314	C=100, g=0.001, eps=0.2
		SNV	0.589	0.488	0.106	0.133	1.398	C=10, g=0.001, eps=0.05
		SG+SNV+D1S T	0.673	0.563	0.094	0.123	1.514	C=1, g=scale, eps=0.2
	XGBoost	RAW	0.998	0.234	0.008	0.163	1.143	{'learning_rate': 0.05, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		SG	0.969	0.197	0.029	0.166	1.116	{'learning_rate': 0.05, 'max_depth': 4, 'max_features': 'sqrt', 'n_estimators': 200, 'subsample': 1.0}
		SNV	0.968	0.473	0.029	0.135	1.378	{'learning_rate': 0.05, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		SG+SNV+D1S T	0.957	0.579	0.034	0.121	1.541	{'learning_rate': 0.01, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 1.0}
	MLP	RAW	0.461	0.322	0.121	0.153	1.214	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}

CAF	1D-CNN-SE	SG	0.478	0.311	0.119	0.154	1.205	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SNV	0.520	0.476	0.114	0.134	1.382	{'learning_rate': 0.001, 'dropout_rate': 0.4, 'hidden_sizes': [256, 128, 64]}
		SG+SNV+D1S T	0.620	0.634	0.102	0.112	1.654	{'learning_rate': 0.001, 'dropout_rate': 0.4, 'hidden_sizes': [256, 128, 64]}
		RAW	0.713	0.389	0.088	0.145	1.279	{'learning_rate': 0.001, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
		SG	0.495	0.345	0.117	0.150	1.236	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
		SNV	0.713	0.483	0.088	0.134	1.391	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
	PLSR	SG+SNV+D1S T	0.857	0.556	0.062	0.124	1.501	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
		RAW	0.573	0.576	0.524	0.480	1.535	16
		SG	0.592	0.547	0.512	0.496	1.486	20
		SNV	0.528	0.452	0.551	0.546	1.351	9
		SG+SNV+D1S T	0.561	0.564	0.532	0.487	1.514	6
		RAW	0.494	0.429	0.570	0.557	1.324	C=10, g=0.001, eps=0.2
	SVR	SG	0.494	0.429	0.570	0.557	1.324	C=10, g=0.001, eps=0.2
		SNV	0.656	0.458	0.470	0.543	1.359	C=10, g=0.001, eps=0.2
		SG+SNV+D1S T	0.713	0.599	0.429	0.467	1.579	C=1, g=scale, eps=0.2
		RAW	0.683	0.333	0.452	0.602	1.225	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': None, 'n_estimators': 300, 'subsample': 0.8}
		SG	0.889	0.305	0.267	0.615	1.200	{'learning_rate': 0.05, 'max_depth': 4, 'max_features': None, 'n_estimators': 100, 'subsample': 0.8}
		SNV	0.746	0.473	0.404	0.535	1.378	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 1.0}
	XGBoost	SG+SNV+D1S T	0.982	0.533	0.108	0.504	1.464	{'learning_rate': 0.05, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		RAW						
		SG						
		SNV						
		SG+SNV+D1S T						
		RAW						
		SG						
		SNV						

GCG	MLP	RAW	0.516	0.322	0.558	0.607	1.215	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SG	0.497	0.346	0.568	0.597	1.236	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SNV	0.640	0.349	0.481	0.595	1.239	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SG+SNV+D1S T	0.740	0.377	0.409	0.582	1.267	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
	1D-CNN-SE	RAW	0.586	0.416	0.516	0.563	1.309	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
		SG	0.612	0.386	0.500	0.578	1.276	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
		SNV	0.778	0.186	0.378	0.666	1.108	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
		SG+SNV+D1S T	0.875	0.365	0.284	0.588	1.255	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
	PLSR	RAW	0.569	0.531	0.040	0.043	1.460	13
		SG	0.566	0.530	0.040	0.043	1.458	13
		SNV	0.607	0.485	0.038	0.045	1.393	14
		SG+SNV+D1S T	0.611	0.533	0.038	0.043	1.464	6
	SVR	RAW	0.567	0.492	0.040	0.044	1.403	C=100, g=0.001, eps=0.05
		SG	0.566	0.491	0.040	0.044	1.402	C=100, g=0.001, eps=0.05
		SNV	0.716	0.330	0.032	0.051	1.222	C=10, g=scale, eps=0.2
		SG+SNV+D1S T	0.660	0.525	0.035	0.043	1.451	C=1, g=0.001, eps=0.2
	XGBoost	RAW	0.989	0.269	0.006	0.053	1.170	{'learning_rate': 0.1, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 100, 'subsample': 1.0}
		SG	0.936	0.419	0.015	0.047	1.312	{'learning_rate': 0.05, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		SNV	0.880	0.416	0.021	0.048	1.308	{'learning_rate': 0.01, 'max_depth': 5, 'max_features': None, 'n_estimators': 200, 'subsample': 0.8}

GC	MLP	SG+SNV+D1S T	0.956	0.587	0.013	0.040	1.557	{'learning_rate': 0.05, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 200, 'subsample': 0.8}
		RAW	0.498	0.550	0.043	0.042	1.491	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SG	0.529	0.542	0.042	0.042	1.478	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SNV	0.628	0.409	0.037	0.048	1.300	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
	1D-CNN-SE	SG+SNV+D1S T	0.795	0.512	0.027	0.043	1.431	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		RAW	0.660	0.362	0.035	0.050	1.252	{'learning_rate': 0.001, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [3, 3, 3]}
		SG	0.687	0.363	0.034	0.050	1.253	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
		SNV	0.853	0.315	0.023	0.051	1.208	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
	PLSR	SG+SNV+D1S T	0.914	0.543	0.018	0.042	1.479	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
		RAW	0.440	0.473	0.181	0.152	1.377	11
		SG	0.439	0.477	0.181	0.151	1.383	11
		SNV	0.476	0.532	0.175	0.143	1.462	12
	SVR	SG+SNV+D1S T	0.447	0.519	0.180	0.145	1.441	5
		RAW	0.502	0.370	0.171	0.166	1.260	C=100, g=0.001, eps=0.2
		SG	0.502	0.371	0.171	0.166	1.261	C=100, g=0.001, eps=0.2
		SNV	0.664	0.393	0.140	0.163	1.284	C=10, g=scale, eps=0.2
	XGBoost	SG+SNV+D1S T	0.632	0.534	0.147	0.143	1.465	C=1, g=scale, eps=0.2
		RAW	0.630	0.227	0.147	0.184	1.137	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 1.0}
		SG	0.993	0.083	0.020	0.200	1.045	{'learning_rate': 0.1, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}

EGCG	MLP	SNV	0.967	0.510	0.044	0.147	1.428	{'learning_rate': 0.05, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 100, 'subsample': 0.8}
		SG+SNV+D1S T	0.914	0.576	0.071	0.136	1.536	{'learning_rate': 0.01, 'max_depth': 4, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 1.0}
		RAW	0.534	0.467	0.165	0.153	1.370	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SG	0.528	0.498	0.166	0.148	1.412	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SNV	0.539	0.686	0.164	0.117	1.785	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
	1D-CNN-SE	SG+SNV+D1S T	0.521	0.715	0.168	0.112	1.872	{'learning_rate': 0.001, 'dropout_rate': 0.4, 'hidden_sizes': [512, 256, 128, 64]}
		RAW	0.620	0.436	0.149	0.157	1.332	{'learning_rate': 0.001, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
		SG	0.644	0.436	0.144	0.157	1.332	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
		SNV	0.765	0.502	0.117	0.148	1.417	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
		SG+SNV+D1S T	0.803	0.358	0.107	0.168	1.248	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
	PLSR	RAW	0.567	0.500	1.174	1.212	1.414	18
		SG	0.519	0.498	1.238	1.215	1.411	18
		SNV	0.509	0.482	1.251	1.234	1.389	14
		SG+SNV+D1S T	0.574	0.486	1.165	1.229	1.394	7
		RAW	0.583	0.427	1.152	1.297	1.321	C=500, g=0.001, eps=0.05
	SVR	SG	0.579	0.421	1.158	1.304	1.315	C=500, g=0.001, eps=0.05
		SNV	0.709	0.553	0.962	1.146	1.496	C=10, g=scale, eps=0.1
		SG+SNV+D1S T	0.898	0.611	0.570	1.070	1.603	C=10, g=0.001, eps=0.1
	XGBoost	RAW	0.588	0.320	1.146	1.413	1.213	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}

GA		SG	0.589	0.318	1.144	1.416	1.210	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		SNV	0.901	0.532	0.561	1.173	1.462	{'learning_rate': 0.05, 'max_depth': 4, 'max_features': 'sqrt', 'n_estimators': 100, 'subsample': 1.0}
		SG+SNV+D1S T	1.000	0.607	0.028	1.075	1.594	{'learning_rate': 0.05, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
	MLP	RAW	0.385	0.338	1.399	1.394	1.229	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SG	0.393	0.321	1.390	1.412	1.214	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SNV	0.573	0.476	1.166	1.241	1.381	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
	1D-CNN-SE	SG+SNV+D1S T	0.791	0.398	0.817	1.330	1.289	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		RAW	0.365	0.268	1.422	1.467	1.168	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
		SG	0.304	0.290	1.489	1.444	1.187	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
		SNV	0.754	0.392	0.885	1.337	1.282	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
		SG+SNV+D1S T	0.891	0.478	0.589	1.238	1.384	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
	PLSR	RAW	0.396	0.405	0.001	0.001	1.296	19
		SG	0.361	0.440	0.001	0.001	1.337	19
		SNV	0.316	0.365	0.001	0.001	1.255	13
	SVR	SG+SNV+D1S T	0.403	0.345	0.001	0.001	1.236	8
		RAW	0.179	0.240	0.001	0.001	1.147	C=10, g=0.001, eps=0.01
		SG	0.179	0.240	0.001	0.001	1.147	C=10, g=0.001, eps=0.01
		SNV	0.233	0.363	0.001	0.001	1.253	C=1, g=0.001, eps=0.1
		SG+SNV+D1S T	0.485	0.445	0.001	0.001	1.343	C=1, g=scale, eps=0.2

ECG	XGBoost	RAW	0.278	0.173	0.001	0.001	1.100	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 100, 'subsample': 0.8}
		SG	0.281	0.176	0.001	0.001	1.102	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 100, 'subsample': 0.8}
		SNV	0.619	0.335	0.001	0.001	1.226	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 1.0}
		SG+SNV+D1S T	0.892	0.446	0.000	0.001	1.343	{'learning_rate': 0.01, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
	MLP	RAW	0.146	0.206	0.001	0.001	1.122	{'learning_rate': 0.0005, 'dropout_rate': 0.4, 'hidden_sizes': [256, 128, 64]}
		SG	0.230	0.239	0.001	0.001	1.146	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SNV	0.505	0.495	0.001	0.001	1.407	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SG+SNV+D1S T	0.509	0.572	0.001	0.001	1.529	{'learning_rate': 0.001, 'dropout_rate': 0.4, 'hidden_sizes': [256, 128, 64]}
	1D-CNN-SE	RAW	0.336	0.282	0.001	0.001	1.180	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
		SG	0.167	0.139	0.001	0.001	1.078	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
		SNV	0.766	0.438	0.001	0.001	1.334	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [3, 3, 3]}
		SG+SNV+D1S T	0.833	0.419	0.001	0.001	1.312	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [3, 3, 3]}
	PLSR	RAW	0.465	0.355	0.411	0.424	1.245	17
		SG	0.453	0.362	0.416	0.421	1.252	17
		SNV	0.409	0.347	0.432	0.426	1.237	12
		SG+SNV+D1S T	0.636	0.315	0.339	0.437	1.208	11
	SVR	RAW	0.541	0.304	0.381	0.440	1.198	C=500, g=0.001, eps=0.2
		SG	0.539	0.305	0.382	0.440	1.199	C=500, g=0.001, eps=0.2
		SNV	0.546	0.453	0.379	0.390	1.352	C=10, g=0.001, eps=0.2

EGC	XGBoost	SG+SNV+D1S T	0.612	0.497	0.350	0.374	1.410	C=1, g=scale, eps=0.2
		RAW	0.534	0.185	0.384	0.476	1.107	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		SG	0.530	0.201	0.386	0.472	1.119	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		SNV	0.643	0.382	0.336	0.415	1.272	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
	MLP	SG+SNV+D1S T	0.897	0.453	0.180	0.390	1.352	{'learning_rate': 0.01, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 0.8}
		RAW	0.354	0.269	0.452	0.451	1.169	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SG	0.381	0.293	0.443	0.444	1.189	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SNV	0.389	0.385	0.440	0.414	1.276	{'learning_rate': 0.001, 'dropout_rate': 0.4, 'hidden_sizes': [256, 128, 64]}
	1D-CNN-SE	SG+SNV+D1S T	0.562	0.493	0.372	0.376	1.405	{'learning_rate': 0.001, 'dropout_rate': 0.4, 'hidden_sizes': [256, 128, 64]}
		RAW	0.461	0.277	0.413	0.449	1.176	{'learning_rate': 0.001, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [3, 3, 3]}
		SG	0.500	0.278	0.398	0.448	1.177	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
		SNV	0.740	0.346	0.287	0.427	1.236	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
	PLSR	SG+SNV+D1S T	0.844	0.368	0.222	0.419	1.258	{'learning_rate': 0.001, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
		RAW	0.339	0.084	1.033	1.137	1.045	14
		SG	0.332	0.081	1.038	1.139	1.043	14
		SNV	0.430	-0.120	0.958	1.258	0.945	17
	SVR	SG+SNV+D1S T	0.298	0.205	1.064	1.060	1.121	5
		RAW	0.702	0.031	0.693	1.170	1.016	C=1, g=0.1, eps=0.2
		SG	0.702	0.031	0.693	1.170	1.016	C=1, g=0.1, eps=0.2

EC	XGBoost	SNV	0.484	-0.041	0.912	1.213	0.980	C=10, g=0.001, eps=0.01
		SG+SNV+D1S T	0.960	0.070	0.253	1.146	1.037	C=10, g=scale, eps=0.01
		RAW	0.364	-0.065	1.013	1.227	0.969	{'learning_rate': 0.01, 'max_depth': 4, 'max_features': None, 'n_estimators': 100, 'subsample': 0.8}
		SG	0.218	0.009	1.123	1.183	1.004	{'learning_rate': 0.01, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 100, 'subsample': 0.8}
		SNV	0.836	-0.007	0.514	1.193	0.997	{'learning_rate': 0.01, 'max_depth': 4, 'max_features': None, 'n_estimators': 300, 'subsample': 0.8}
	MLP	SG+SNV+D1S T	0.929	0.133	0.339	1.107	1.074	{'learning_rate': 0.01, 'max_depth': 5, 'max_features': 'sqrt', 'n_estimators': 300, 'subsample': 1.0}
		RAW	0.060	0.070	1.231	1.147	1.037	{'learning_rate': 0.001, 'dropout_rate': 0.4, 'hidden_sizes': [256, 128, 64]}
		SG	0.130	0.064	1.184	1.150	1.034	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [512, 256, 128, 64]}
		SNV	0.558	0.075	0.844	1.144	1.039	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
		SG+SNV+D1S T	0.706	-0.055	0.688	1.221	0.974	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
	1D-CNN-SE	RAW	0.051	0.073	1.237	1.145	1.038	{'learning_rate': 0.001, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [3, 3, 3]}
		SG	0.081	0.060	1.217	1.153	1.031	{'learning_rate': 0.001, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
		SNV	0.862	-0.039	0.472	1.212	0.981	{'learning_rate': 0.0005, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [2, 2, 2]}
		SG+SNV+D1S T	0.815	-0.144	0.546	1.271	0.935	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
		RAW	0.343	0.164	0.458	0.417	1.094	13
	PLSR	SG	0.336	0.186	0.460	0.411	1.108	13
		SNV	0.487	-0.090	0.405	0.476	0.958	17
		SG+SNV+D1S T	0.652	-0.221	0.334	0.504	0.905	11
	SVR	RAW	0.491	-0.047	0.403	0.466	0.977	C=500, g=0.001, eps=0.1

XGBoost	SG	0.489	-0.046	0.404	0.466	0.978	C=500, g=0.001, eps=0.1
	SNV	0.509	0.306	0.396	0.380	1.200	C=10, g=0.001, eps=0.05
	SG+SNV+D1S T	0.815	0.300	0.243	0.381	1.196	C=10, g=0.001, eps=0.01
	RAW	0.567	-0.225	0.372	0.505	0.904	{'learning_rate': 0.01, 'max_depth': 5, 'max_features': None, 'n_estimators': 100, 'subsample': 0.8}
MLP	SG	0.562	-0.202	0.374	0.500	0.912	{'learning_rate': 0.01, 'max_depth': 5, 'max_features': None, 'n_estimators': 100, 'subsample': 0.8}
	SNV	0.984	-0.014	0.071	0.459	0.993	{'learning_rate': 0.1, 'max_depth': 3, 'max_features': 'sqrt', 'n_estimators': 200, 'subsample': 0.8}
	SG+SNV+D1S T	0.989	0.375	0.060	0.360	1.265	{'learning_rate': 0.05, 'max_depth': 4, 'max_features': 'sqrt', 'n_estimators': 200, 'subsample': 1.0}
	RAW	0.199	0.148	0.506	0.421	1.084	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
1D-CNN-SE	SG	0.156	0.175	0.519	0.414	1.101	{'learning_rate': 0.001, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
	SNV	0.516	0.035	0.393	0.448	1.018	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
	SG+SNV+D1S T	0.723	0.129	0.298	0.425	1.072	{'learning_rate': 0.0005, 'dropout_rate': 0.2, 'hidden_sizes': [256, 128, 64]}
	RAW	0.314	0.107	0.468	0.431	1.058	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [3, 3, 3]}
	SG	0.223	0.216	0.498	0.404	1.129	{'learning_rate': 0.001, 'dropout_rate': 0.5, 'batch_size': 32, 'layers': [3, 3, 3]}
	SNV	0.814	-0.078	0.244	0.473	0.963	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
	SG+SNV+D1S T	0.843	0.226	0.224	0.401	1.136	{'learning_rate': 0.0005, 'dropout_rate': 0.3, 'batch_size': 32, 'layers': [2, 2, 2]}
