

Table S1. The external validation results of PLS model.

No.	Moisture					Protein					Wet gluten					Starch					Sedimentation index				
	Predicted value	Confidence interval	Reference value	Absolute error	Deviation	Predicted value	Confidence interval	Reference value	Absolute error	Deviation	Predicted value	Confidence interval	Reference value	Absolute error	Deviation	Predicted value	Confidence interval	Reference value	Absolute error	Deviation	Predicted value	Confidence interval	Reference value	Absolute error	Deviation
1	12.85	0.35	12.83	0.02	0.16%	14.03	0.48	13.69	0.34	2.48%	30.03	1.69	28.43	1.60	5.63%	57.61	0.74	58.14	0.53	0.91%	58	4.7	55.4	2.6	4.69%
2	12.34	0.35	12.4	0.06	0.48%	14.73	0.47	14.64	0.09	0.61%	31.03	1.69	31.02	0.01	0.03%	57.8	0.74	58.33	0.53	0.91%	58.7	4.6	63	4.3	6.83%
3	13.56	0.35	13.49	0.07	0.52%	15.25	0.49	15.15	0.10	0.66%	32.51	1.73	31.34	1.17	3.73%	56.6	0.75	56.97	0.37	0.65%	64.7	4.8	63.1	1.6	2.54%
4	12.75	0.35	13.01	0.26	2.00%	14.49	0.48	14.23	0.26	1.83%	30.72	1.69	29.43	1.29	4.38%	57.59	0.74	57.74	0.15	0.26%	57.7	4.7	56.1	1.6	2.85%
5	11.2	0.35	11.16	0.04	0.36%	14.28	0.49	14.21	0.07	0.49%	30.2	1.72	30.22	0.02	0.07%	58.66	0.75	58.99	0.33	0.56%	58.6	4.7	60.1	1.5	2.50%
6	12.13	0.35	12.12	0.01	0.08%	12.29	0.49	12.25	0.04	0.33%	25.32	1.72	25.35	0.03	0.12%	59.71	0.75	59.25	0.46	0.78%	43.6	4.8	43.1	0.5	1.16%
7	11.46	0.34	11.54	0.08	0.69%	14.35	0.48	14.17	0.18	1.27%	30.59	1.69	29.59	1.00	3.38%	58.42	0.74	58.68	0.26	0.44%	58.4	4.6	56.7	1.7	3.00%
8	12.68	0.34	12.63	0.05	0.40%	14.1	0.48	14.26	0.16	1.12%	29.95	1.7	29.73	0.22	0.74%	58.11	0.74	58.39	0.28	0.48%	56	4.7	60.2	4.2	6.98%
9	10.77	0.36	10.92	0.15	1.37%	14.92	0.49	14.94	0.02	0.13%	33.7	1.73	33.12	0.58	1.75%	57.49	0.76	57.36	0.13	0.23%	60.5	4.8	59.6	0.9	1.51%
10	10.84	0.35	10.88	0.04	0.37%	14.06	0.48	14.09	0.03	0.21%	30.64	1.71	30.62	0.02	0.07%	58.4	0.75	58.43	0.03	0.05%	58	4.8	56.2	1.8	3.20%
11	9.79	0.36	9.66	0.13	1.35%	14.71	0.50	14.52	0.19	1.31%	31.31	1.75	30.98	0.33	1.07%	58.34	0.77	58.9	0.56	0.95%	51.6	4.9	56	4.4	7.86%
12	11.29	0.34	11.2	0.09	0.80%	15.95	0.48	15.78	0.17	1.08%	34.71	1.71	34.71	0	0.00%	57.1	0.75	57.22	0.12	0.21%	63.2	4.7	63.9	0.7	1.10%
13	10.61	0.36	10.5	0.11	1.05%	16.64	0.50	16.75	0.11	0.66%	35.99	1.76	36.32	0.33	0.91%	56.31	0.77	56.35	0.04	0.07%	66.7	4.9	64.3	2.4	3.73%
14	10.04	0.35	10.11	0.07	0.69%	15.15	0.49	15.15	0	0.00%	33.18	1.73	32.04	1.14	3.56%	57.81	0.75	58.2	0.39	0.67%	57.7	4.8	61.3	3.6	5.87%
15	10.5	0.35	10.58	0.08	0.76%	14.69	0.48	14.88	0.19	1.28%	32.04	1.73	32.26	0.22	0.68%	58.2	0.75	58.25	0.05	0.09%	59.9	4.8	61.5	1.6	2.60%
16	10.45	0.34	10.56	0.11	1.04%	15.02	0.48	14.97	0.05	0.33%	32.54	1.72	32.49	0.05	0.15%	58.57	0.74	58.73	0.16	0.27%	61.2	4.7	61.4	0.2	0.33%
17	11.27	0.34	11.29	0.02	0.18%	14.29	0.48	14.22	0.07	0.49%	30.2	1.70	29.98	0.22	0.73%	58.41	0.74	58.83	0.42	0.71%	56.1	4.7	58.5	2.4	4.10%
18	10.95	0.35	10.9	0.05	0.46%	13.51	0.49	13.59	0.08	0.59%	28.11	1.72	28.25	0.14	0.50%	59.15	0.75	59.04	0.11	0.19%	52.2	4.8	49.1	3.1	6.31%
19	10.89	0.36	10.97	0.08	0.73%	13.58	0.49	13.6	0.02	0.15%	28.27	1.74	28.76	0.49	1.70%	59.18	0.76	58.92	0.26	0.44%	52.8	4.8	49.1	3.7	7.54%
20	11.19	0.34	11.34	0.15	1.32%	13.7	0.48	13.74	0.04	0.29%	28.74	1.69	28.69	0.05	0.17%	58.73	0.74	58.87	0.14	0.24%	52.5	4.7	52.5	0	0.00%
21	12.21	0.34	12.24	0.03	0.25%	14.18	0.47	14.59	0.41	2.81%	30.54	1.68	30.7	0.16	0.52%	57.35	0.74	57.21	0.14	0.24%	55.7	4.6	59.6	3.9	6.54%
22	11.58	0.34	11.6	0.02	0.17%	14.15	0.48	14.2	0.05	0.35%	30.24	1.69	30.67	0.43	1.40%	58.09	0.74	58.4	0.31	0.53%	53.7	4.7	57.4	3.7	6.45%

23	11.12	0.34	11.23	0.11	0.98%	13.87	0.48	13.85	0.02	0.14%	29.18	1.70	29.51	0.33	1.12%	58.63	0.74	58.65	0.02	0.03%	52.6	4.7	53.4	0.8	1.50%
24	11.54	0.34	11.57	0.03	0.26%	13.87	0.47	14.11	0.24	1.70%	29.58	1.68	30.43	0.85	2.79%	58.24	0.74	58.01	0.23	0.40%	53.1	4.6	55.6	2.5	4.50%
25	9.33	0.35	9.44	0.11	1.17%	14.2	0.49	14.39	0.19	1.32%	29.64	1.74	30.17	0.53	1.76%	58.94	0.75	59.15	0.21	0.36%	52.8	4.8	55.7	2.9	5.21%
26	8.32	0.36	8.29	0.03	0.36%	14.39	0.51	14.45	0.06	0.42%	29.39	1.79	30.02	0.63	2.10%	61.41	0.78	61.11	0.30	0.49%	49.6	5.0	47.9	1.7	3.55%
27	10.62	0.35	10.52	0.10	0.95%	14.26	0.49	14.22	0.04	0.28%	30.82	1.73	31.04	0.22	0.71%	58.07	0.75	58.26	0.19	0.33%	57.3	4.8	56.7	0.6	1.06%
28	11.49	0.34	11.81	0.32	2.71%	14.14	0.47	14.19	0.05	0.35%	29.5	1.69	30.03	0.53	1.76%	59.07	0.74	58.94	0.13	0.22%	56.5	4.7	59.1	2.6	4.40%
29	10.82	0.34	10.76	0.06	0.56%	13.84	0.48	14.03	0.19	1.35%	30.14	1.71	30.28	0.14	0.46%	58.62	0.74	58.4	0.22	0.38%	52.7	4.7	54	1.3	2.41%
30	11.36	0.34	11.37	0.01	0.09%	14	0.48	13.92	0.08	0.57%	29.64	1.69	29.56	0.08	0.27%	58.63	0.74	58.24	0.39	0.67%	52.9	4.7	52.9	0	0.00%
31	12.51	0.36	12.44	0.07	0.56%	14.14	0.49	14.07	0.07	0.50%	30.05	1.72	28.82	1.23	4.27%	57.91	0.75	58.57	0.66	1.13%	59	4.8	57.4	1.6	2.79%