Table S1 The detailed information of garlic samples

NO.	Code	Origin	Cultivar
1	SD1	Lv County, Rizhao City, Shandong	Rizhaohong
2	SD2	Jinxiang County, Jining City, Shandong	Jinxiang
3	SD3	Chengwu County, Heze City, Shandong	Chengwu
4	SD4	Lanshan County, Linyi City, Shandong	Ershuizao
5	SD5	Anqiu City, Weifang City, Shandong	Anqiu
6	SD6	Lanling County, Linyi City, Shandong	Cangshan
7	SD7	Laicheng County, Laiwu City, Shandong	Laiwu
8	JS1	Feng County, Xuzhou City, Jiangsu	Taikongerhao
9	JS2	Pei County, Xuzhou City, Jiangsu	Sanyuehuang
10	JS3	Tongshan County, Xuzhou City, Jiangsu	Lunong
11	JS4	Jiawang County, Xuzhou City, Jiangsu	Taikongzao
12	JS5	Xinyi County, Xuzhou City, Jiangsu	Yandu
13	JS6	Pizhou County, Xuzhou City, Jiangsu	Pizhou
14	JS7	Quanshan County, Xuzhou City, Jiangsu	erjizao
15	HN1	Zhongmou County, Zhengzhou City,	Sumu
16	HN2	Huiji County, Zhengzhou City, Henan	Caijiapo
17	HN3	Lankao County, Kaifeng City, Henan	Songcheng
18	HN4	Tongxu County, Kaifeng City, Henan	Tongxu
19	HN5	Weishi County, Kaifeng City, Henan	Liubanhong
20	HN6	Qi County, Kaifeng City, Henan	Qixian
21	HN7	Minquan County, Shangqiu City, Henan	Minquan
22	YN1	Guandu County, Kunming City, Yunnan	Siliuban
23	YN2	Mengzi County, Honghe City, Yunnan	Hongqixing
24	YN3	Chenggong County, Kunming City,	Chenggong
25	YN4	Luliang County, Qujing City, Yunnan	Luliang
26	YN5	Midu County, Dali City, Yunnan	Midu
27	YN6	Eryuan County, Dali City, Yunnan	Dali
28	YN7	Binchuan County, Dali City, Yunnan	Binchuan

Table S2 Sensory evaluation standard of fresh garlic

Texture	Taste	Appearance	Flavour	Overall impression
Highly hard	Rare spicy	Pure white	Rare garlic flavour	0-1
Relatively hard	Slightly spicy	White and a litte yellow	Slightly garlic flavour	1-3
Hard	Moderate spicy	White and light yellow	Moderate garlic flavour	3-5
Semi-hard	Very spicy	White and moderate yellow	Highly garlic flavour	5-7
Suitably-hard	Strong spicy	Yellowish-white	Strong garlic flavour	7-9

Table S3 Variation of 43 indicators for garlic samples

NO.	Minimum	Maximum	Average	SD	CV
X1	31.42	33.38	32.72	0.60	1.83%
X2	0.41	1.04	0.61	0.22	35.94%
X3	3.36	5.29	4.06	0.61	14.97%
X4	21.45	61.56	39.00	11.43	29.30%
X5	1.17	4.59	2.78	0.93	33.41%
X6	0.23	0.85	0.52	0.21	40.15%
X7	0.24	0.61	0.47	0.10	20.50%
X8	0.01	0.04	0.03	0.01	22.70%
X9	0.03	0.13	0.08	0.04	42.61%
X10	0.00	0.02	0.01	0.00	33.21%
X11	0.00	0.01	0.01	0.00	25.03%
X12	0.02	0.17	0.10	0.05	46.35%
X13	0.00	0.01	0.01	0.00	56.45%
X14	2.92	4.48	3.71	0.55	14.71%
X15	0.93	2.75	1.90	0.63	33.32%
X16	0.22	0.59	0.43	0.11	24.81%
X17	0.35	1.21	0.87	0.26	29.48%
X18	0.13	0.28	0.21	0.04	21.65%
X19	0.04	0.11	0.08	0.02	25.98%
X20	1.09	1.74	1.49	0.18	12.00%
X21	0.00	0.06	0.02	0.01	62.15%
X22	0.04	0.15	0.09	0.04	40.37%
X23	0.03	0.49	0.23	0.12	53.66%
X24	0.01	0.10	0.06	0.02	40.64%
X25	0.01	0.05	0.03	0.01	29.85%
X26	0.17	0.49	0.30	0.09	31.13%
X27	0.12	0.88	0.48	0.23	49.00%
X28	0.01	0.07	0.04	0.02	51.27%
X29	0.01	0.34	0.12	0.10	85.19%
X30	0.12	0.36	0.23	0.08	36.03%
X31	0.00	0.01	0.01	0.00	70.95%
X32	0.05	0.40	0.17	0.11	66.50%
X33	0.03	0.51	0.21	0.14	68.10%
X34	0.05	0.55	0.27	0.16	59.75%
X35	1.10	2.68	1.61	0.38	23.42%
X36	0.13	1.08	0.59	0.33	55.93%
X37	0.03	0.43	0.24	0.12	52.44%
X38	0.11	0.22	0.16	0.03	21.29%
X39	0.01	0.16	0.04	0.04	93.06%
X40	0.01	0.14	0.06	0.05	74.63%
X41	0.60	1.45	0.81	0.21	25.40%
X42	0.00	0.03	0.02	0.01	48.54%
X43	7.10	9.22	8.10	0.58	7.15%

SD and CV mean standard deviation and coefficient of variation, respectively. X1-X43: L^* value, a^* value, b^* value, ascorbic acid, S-methyl-L-cysteine, quercitrin, propene, propene sulfide, 2-propen-1-ol, di(1-propenyl) sulfide, 2-ethylthiophene, methyl propenyl disulfide, dimethyl trisulfide, diallyl disulfide, diallyl tetrasulphide, (Z)-benzaldoxime, 3-vinyl-1,2-dithiacyclohex-4-ene, diallyl trisulfide, 3-vinyl-1,2-dithiacyclohex-5-ene, propionic acid, 1,3-propanediol, L-alanine, ethanimidic acid, serine, L-threonine, L-proline, n.-octanoic acid, xylulose, ornithine, glutamic acid, arabinose, L-asparagine, lanthionine, L-tyrosine, isocitric acid, D-fructose, D-glucose, L-lysine, gluconic acid, L-homoserine, myo-inositol, succinylacetone, sucrose.

Table S4 Correlation analysis on 43 indicators

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15
X1	1.00														
X2	-0.86*	1.00													
X3	-0.83*	0.96*	1.00												
X4	-0.64	0.78*	0.68	1.00											
X5	0.75*	-0.87*	-0.87*	-0.67	1.00										
X6	-0.55	0.58	0.57	0.28	-0.59	1.00									
X7	-0.19	0.17	0.10	0.34	-0.07	0.22	1.00								
X8	-0.63	0.71*	0.67	0.65	-0.59	0.50	0.72*	1.00							
X9	-0.52	0.43	0.39	0.52	-0.30	0.08	0.56	0.70*	1.00						
X10	0.53	-0.72*	-0.74*	-0.63	0.67	-0.20	0.24	-0.26	-0.13	1.00					
X11	-0.42	0.46	0.39	0.51	-0.35	0.47	0.86*	0.85*	0.61	-0.04	1.00				
X12	0.55	-0.61	-0.65	-0.32	0.69	-0.41	0.42	-0.16	-0.04	0.62	0.13	1.00			
X13	0.47	-0.58	-0.60	-0.17	0.57	-0.37	0.56	0.04	0.27	0.53	0.29	0.73*	1.00		
X14	0.44	-0.55	-0.61	-0.21	0.61	-0.32	0.64	0.07	0.28	0.70*	0.38	0.80*	0.91*	1.00	
X15	0.55	-0.73*	-0.77*	-0.42	0.71*	-0.36	0.45	-0.16	0.12	0.83*	0.15	0.80*	0.86*	0.93*	1.00
X16	-0.17	0.17	0.11	0.36	-0.07	0.13	0.92*	0.69	0.58	0.20	0.82*	0.30	0.56	0.64	0.42
X17	-0.52	0.51	0.45	0.50	-0.42	0.52	0.81*	0.88*	0.73*	0.00	0.92*	0.03	0.21	0.33	0.14
X18	0.04	-0.18	-0.24	0.10	0.26	-0.03	0.81*	0.40	0.58	0.53	0.62	0.57	0.76*	0.86*	0.76*
X19	-0.40	0.45	0.38	0.57	-0.29	0.36	0.76*	0.85*	0.64	-0.06	0.85*	0.08	0.31	0.35	0.12
X20	-0.56	0.69	0.64	0.72*	-0.44	0.28	0.62	0.80*	0.74*	-0.37	0.75*	-0.02	0.05	0.13	-0.14
X21	-0.64	0.74*	0.72*	0.41	-0.69	0.72*	0.07	0.48	0.12	-0.41	0.32	-0.41	-0.57	-0.48	-0.56
X22	0.23	-0.24	-0.20	-0.50	0.06	-0.08	-0.81*	-0.68	-0.71*	0.00	-0.81	-0.40	-0.52	-0.57	-0.33
X23	0.30	-0.51	-0.52	-0.27	0.60	-0.59	0.15	-0.20	0.37	0.42	-0.07	0.65	0.62	0.64	0.64
X24	-0.03	-0.11	-0.08	-0.35	-0.08	0.33	-0.44	-0.30	-0.41	0.19	-0.42	-0.32	-0.38	-0.34	-0.12
X25	0.11	-0.22	-0.14	-0.40	0.03	0.25	-0.46	-0.33	-0.38	0.22	-0.53	-0.29	-0.24	-0.30	-0.05
X26	-0.13	-0.01	-0.02	-0.30	0.00	0.61	0.35	0.26	0.07	0.47	0.37	0.04	0.06	0.22	0.29
X27	-0.38	0.62	0.63	0.56	-0.46	-0.09	-0.25	0.21	0.15	-0.87*	-0.07	-0.46	-0.48	-0.59	-0.74
X28	-0.25	0.10	0.05	0.08	-0.05	0.53	0.75*	0.53	0.41	0.42	0.75*	0.32	0.40	0.55	0.47
X29	-0.66	0.84*	0.88*	0.49	-0.79*	0.50	-0.20	0.41	0.09	-0.75*	0.08	-0.70*	-0.76*	-0.81*	-0.90*
X30	0.48	-0.59	-0.52	-0.80*	0.40	-0.07	-0.63	-0.70*	-0.68	0.40	-0.69	-0.06	-0.12	-0.16	0.11
X31	0.70*	-0.78*	-0.81*	-0.37	0.79*	-0.65	0.26	-0.30	0.07	0.63	-0.02	0.81*	0.86*	0.86*	0.89*
X32	0.17	-0.10	-0.05	-0.30	0.03	-0.28	-0.83*	-0.57	-0.57	-0.25	-0.81*	-0.48	-0.57	-0.66	-0.51
X33	-0.51	0.74*	0.75*	0.65	-0.64	0.17	-0.21	0.32	0.14	-0.89*	0.02	-0.50	-0.59	-0.71*	-0.84*
X34	-0.36	0.53	0.56	0.45	-0.49	-0.14	-0.40	0.10	0.16	-0.76*	-0.24	-0.70*	-0.54	-0.66	-0.74*
X35	-0.02	-0.02	-0.05	0.30	0.17	-0.55	0.29	0.14	0.43	-0.14	0.20	0.30	0.37	0.36	0.18
X36	0.61	-0.75*	-0.68	-0.87*	0.52	-0.15	-0.46	-0.74*	-0.69	0.58	-0.64	0.13	0.04	0.05	0.31
X37	0.75*	-0.87*	-0.82*	-0.86*	0.68	-0.34	-0.41	-0.77*	-0.59	0.68	-0.61	0.32	0.22	0.24	0.48
X38	0.61	-0.55	-0.53	-0.48	0.64	-0.68	-0.55	-0.67	-0.43	0.07	-0.68	0.22	0.09	0.01	0.11
X39	0.28	-0.22	-0.25	-0.11	0.25	-0.30	-0.13	-0.19	-0.03	0.21	-0.28	0.15	0.07	0.10	0.20
X40	-0.56	0.69	0.73*	0.53	-0.63	0.17	-0.25	0.24	0.09	-0.86*	-0.07	-0.59	-0.61	-0.72*	-0.82*
X41	-0.57	0.72*	0.70*	0.77*	-0.60	0.09	0.22	0.58	0.55	-0.61	0.42	-0.31	-0.26	-0.29	-0.47
X42	-0.07	0.19	0.21	-0.14	-0.08	-0.03	-0.39	-0.10	-0.29	-0.26	-0.33	-0.29	-0.49	-0.47	-0.47
X43	-0.55	0.76*	0.77*	0.48	-0.61	0.33	-0.24	0.31	0.00	-0.82*	0.06	-0.66	-0.70*	-0.77*	-0.89*

Table S4 (continued) Correlation analysis on 43 indicators

	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30
X16	1.00														
X17	0.77*	1.00													
X18	0.82*	0.63	1.00												
X19	0.79*	0.83*	0.57	1.00											
X20	0.64	0.76*	0.41	0.72*	1.00										
X21	-0.03	0.40	-0.19	0.20	0.37	1.00									
X22	-0.78*	-0.76*	-0.69	-0.78*	-0.78*	0.00	1.00								
X23	0.15	0.02	0.50	0.02	0.04	-0.51	-0.32	1.00							
X24	-0.53	-0.24	-0.31	-0.38	-0.56	0.26	0.67	-0.32	1.00						
X25	-0.52	-0.34	-0.30	-0.39	-0.59	0.06	0.65	-0.22	0.83*	1.00					
X26	0.27	0.46	0.34	0.30	0.01	0.27	-0.08	-0.13	0.42	0.30	1.00				
X27	-0.19	-0.09	-0.49	0.02	0.41	0.29	-0.01	-0.24	-0.33	-0.32	-0.60	1.00			
X28	0.68	0.75*	0.74*	0.59	0.43	0.26	-0.58	0.09	-0.06	-0.14	0.73*	-0.57	1.00		
X29	-0.20	0.11	-0.55	0.07	0.33	0.74*	0.13	-0.61	0.01	0.00	-0.17	0.66	-0.22	1.00	
X30	-0.61	-0.64	-0.39	-0.62	-0.84*	-0.25	0.80*	-0.04	0.65	0.74*	0.22	-0.41	-0.29	-0.26	1.00
X31	0.28	-0.08	0.58	0.02	-0.15	-0.73*	-0.31	0.75*	-0.32	-0.22	-0.05	-0.45	0.14	-0.89*	0.06
X32	-0.75*	-0.78*	-0.79*	-0.70*	-0.57	-0.09	0.86*	-0.28	0.36	0.40	-0.39	0.38	-0.84*	0.27	0.60
X33	-0.24	0.02	-0.54	0.08	0.38	0.49	-0.01	-0.37	-0.20	-0.21	-0.53	0.88*	-0.47	0.84*	-0.43
X34	-0.23	-0.19	-0.52	-0.10	0.20	0.12	0.21	-0.28	-0.18	-0.10	-0.60	0.84*	-0.67	0.64	-0.21
X35	0.36	0.15	0.28	0.31	0.39	-0.47	-0.57	0.54	-0.69	-0.59	-0.44	0.31	-0.14	-0.25	-0.50
X36	-0.48	-0.61	-0.23	-0.63	-0.89*	-0.35	0.70*	0.03	0.59	0.63	0.29	-0.60	-0.17	-0.45	0.93*
X37	-0.42	-0.60	-0.08	-0.57	-0.83*	-0.51	0.56	0.25	0.44	0.51	0.18	-0.60	-0.18	-0.63	0.86*
X38	-0.47	-0.71*	-0.33	-0.53	-0.45	-0.53	0.40	0.35	-0.10	0.10	-0.45	0.20	-0.66	-0.28	0.48
X39	-0.13	-0.21	0.02	-0.03	-0.18	-0.10	0.11	0.18	0.05	0.09	0.01	-0.01	-0.16	-0.19	0.10
X40	-0.27	-0.03	-0.59	-0.06	0.31	0.47	0.08	-0.38	-0.09	-0.09	-0.47	0.77*	-0.42	0.81*	-0.33
X41	0.30	0.41	-0.03	0.46	0.69	0.24	-0.44	-0.12	-0.54	-0.53	-0.40	0.63	-0.09	0.58	-0.72*
X42	-0.35	-0.32	-0.53	-0.19	-0.06	0.20	0.41	-0.22	0.05	0.12	-0.11	0.49	-0.44	0.41	0.34
X43	-0.23	0.01	-0.57	0.02	0.30	0.59	0.12	-0.61	-0.08	-0.17	-0.32	0.78*	-0.36	0.88*	-0.31

Table S4 (continued) Correlation analysis on 43 indicators

	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43
X31	1.00												
X32	-0.33	1.00											
X33	-0.65	0.28	1.00										
X34	-0.50	0.56	0.75*	1.00									
X35	0.43	-0.24	0.11	0.24	1.00								
X36	0.23	0.44	-0.61	-0.39	-0.47	1.00							
X37	0.47	0.36	-0.68	-0.42	-0.26	0.93*	1.00						
X38	0.42	0.59	-0.06	0.20	0.27	0.40	0.54	1.00					
X39	0.31	0.10	-0.12	-0.02	-0.01	0.12	0.27	0.28	1.00				
X40	-0.70*	0.31	0.87*	0.70*	0.06	-0.49	-0.66	-0.11	-0.28	1.00			
X41	-0.37	-0.14	0.72*	0.61	0.40	-0.82*	-0.80*	-0.32	-0.16	0.57	1.00		
X42	-0.34	0.65	0.34	0.45	-0.04	0.12	0.10	0.47	0.15	0.29	0.04	1.00	
X43	-0.79*	0.35	0.85*	0.69*	-0.11	-0.49	-0.61	-0.10	-0.20	0.77*	0.53	0.41	1.00

* mean significant level at 0.05, numbers indicate the Pearson's correlation coefficient values (r). X1-X43: L^* value, a^* value, b^* value, ascorbic acid, S-methyl-L-cysteine, quercitrin, propene, propene sulfide, 2-propen-1-ol, di(1-propenyl) sulfide, 2-ethylthiophene, methyl propenyl disulfide, dimethyl trisulfide, diallyl disulfide, diallyl tetrasulphide, (Z)-benzaldoxime, 3-vinyl-1,2-dithiacyclohex-4-ene, diallyl trisulfide, 3-vinyl-1,2-dithiacyclohex-5-ene, propionic acid, 1,3-propanediol, L-alanine, ethanimidic acid, serine, L-threonine, L-proline, n.-octanoic acid,

xylulose, ornithine, glutamic acid, arabinose, L-asparagine, lanthionine, L-tyrosine, isocitric acid, D-fructose, D-glucose, L-lysine, gluconic acid, L-homoserine, myo-inositol, succinylacetone, sucrose.

Table S5 The relative concentration of 43 quality indicators

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43
SD1	33.250	0.407	3.363	34.890	3.070	0.408	0.382	0.023	0.046	0.013	0.005	0.082	0.005	3.381	1.670	0.286	0.502	0.158	0.047	1.090	0.018	0.136	0.162	0.073	0.039	0.195	0.355	0.011	0.123	0.256	0.004	0.280	0.245	0.247	1.096	0.843	0.300	0.150	0.037	0.077	0.642	0.004	8.360
SD2	33.203	0.450	3.890	29.510	2.540	0.423	0.242	0.014	0.029	0.008	0.003	0.064	0.003	3.000	1.415	0.218	0.347	0.139	0.036	1.184	0.017	0.150	0.181	0.100	0.049	0.228	0.431	0.011	0.130	0.324	0.004	0.270	0.228	0.359	1.317	1.076	0.348	0.176	0.030	0.099	0.610	0.004	8.050
SD3	32.253	0.570	3.867	36.340	3.030	0.529	0.307	0.019	0.037	0.011	0.004	0.072	0.002	2.933	1.553	0.237	0.467	0.132	0.043	1.269	0.016	0.149	0.207	0.073	0.048	0.220	0.529	0.016	0.164	0.359	0.003	0.376	0.268	0.358	1.597	0.891	0.309	0.206	0.022	0.113	0.781	0.025	8.226
SD4	33.183	0.430	3.913	25.310	3.550	0.460	0.350	0.020	0.037	0.012	0.005	0.083	0.003	3.257	1.564	0.267	0.496	0.159	0.050	1.274	0.018	0.136	0.173	0.080	0.041	0.238	0.540	0.012	0.139	0.349	0.003	0.379	0.238	0.344	1.360	1.048	0.396	0.189	0.027	0.090	0.600	0.028	8.548
SD5	33.293	0.460	3.867	21.450	3.140	0.290	0.333	0.024	0.036	0.013	0.004	0.086	0.003	3.328	1.521	0.304	0.493	0.125	0.049	1.309	0.021	0.142	0.202	0.082	0.046	0.276	0.557	0.010	0.148	0.364	0.004	0.385	0.214	0.375	1.406	1.040	0.362	0.195	0.032	0.119	0.696	0.032	7.925
SD6	33.253	0.523	3.670	28.630	3.160	0.434	0.329	0.022	0.036	0.013	0.005	0.091	0.003	3.304	1.499	0.335	0.528	0.171	0.064	1.312	0.023	0.153	0.214	0.073	0.037	0.317	0.631	0.014	0.132	0.365	0.005	0.404	0.214	0.388	1.369	1.024	0.404	0.219	0.035	0.012	0.678	0.033	8.195
SD7	33.297	0.523	3.800	26.530	3.060	0.477	0.328	0.020	0.034	0.012	0.005	0.076	0.002	3.220	1.542	0.278	0.514	0.148	0.056	1.277	0.020	0.145	0.119	0.079	0.039	0.326	0.577	0.012	0.103	0.329	0.005	0.336	0.185	0.353	1.407	0.887	0.425	0.195	0.153	0.013	0.660	0.028	8.371
JS1	33.183	0.527	3.820	35.490	2.220	0.732	0.615	0.036	0.049	0.016	0.010	0.106	0.008	4.213	2.334	0.593	1.172	0.229	0.101	1.437	0.016	0.063	0.034	0.065	0.033	0.416	0.148	0.055	0.042	0.255	0.007	0.072	0.042	0.070	1.475	0.862	0.296	0.123	0.012	0.016	0.644	0.012	7.638
JS2	33.237	0.530	3.730	37.790	3.410	0.819	0.574	0.030	0.045	0.016	0.009	0.122	0.006	4.034	2.332	0.555	0.962	0.229	0.092	1.479	0.017	0.077	0.028	0.056	0.037	0.478	0.155	0.064	0.055	0.232	0.006	0.061	0.035	0.064	1.388	0.791	0.267	0.132	0.011	0.015	0.697	0.010	7.775
JS3	32.623	0.490	3.913	27.810	3.030	0.787	0.519	0.030	0.107	0.015	0.008	0.115	0.009	4.080	2.300	0.459	0.971	0.237	0.085	1.530	0.015	0.073	0.341	0.061	0.036	0.449	0.174	0.070	0.045	0.277	0.007	0.070	0.035	0.066	1.294	0.799	0.320	0.126	0.013	0.014	0.642	0.012	7.509
JS4	32.490	0.527	3.827	30.270	2.910	0.704	0.505	0.031	0.105	0.015	0.008	0.113	0.007	4.089	2.476	0.497	1.040	0.262	0.097	1.469	0.020	0.086	0.300	0.079	0.046	0.429	0.129	0.060	0.059	0.318	0.006	0.073	0.037	0.057	1.348	0.775	0.290	0.129	0.012	0.015	0.671	0.011	7.395
JS5	32.540	0.510	3.910	30.170	3.240	0.657	0.499	0.030	0.063	0.018	0.009	0.131	0.007	4.223	2.464	0.510	1.116	0.255	0.087	1.414	0.035	0.096	0.268	0.088	0.036	0.402	0.116	0.065	0.060	0.268	0.006	0.076	0.035	0.046	1.304	0.730	0.288	0.130	0.014	0.013	0.680	0.010	7.964
JS6	32.610	0.540	3.863	27.930	2.530	0.659	0.541	0.029	0.118	0.019	0.008	0.134	0.005	4.109	2.683	0.427	1.159	0.264	0.050	1.490	0.039	0.087	0.302	0.086	0.040	0.452	0.131	0.064	0.070	0.238	0.006	0.072	0.038	0.060	1.241	0.831	0.330	0.123	0.015	0.014	0.629	0.010	7.416
JS7	32.590	0.540	3.777	36.480	3.350	0.585	0.496	0.032	0.110	0.019	0.007	0.118	0.006	4.038	2.651	0.445	1.029	0.250	0.100	1.444	0.033	0.080	0.324	0.090	0.045	0.492	0.146	0.061	0.065	0.252	0.008	0.078	0.044	0.066	1.208	0.790	0.306	0.138	0.157	0.014	0.606	0.014	7.295
HN1	33.193	0.433	3.577	29.870	3.860	0.232	0.494	0.029	0.113	0.009	0.008	0.148	0.009	4.148	2.366	0.455	1.009	0.215	0.084	1.552	0.004	0.052	0.493	0.023	0.018	0.299	0.663	0.027	0.015	0.192	0.012	0.130	0.221	0.292	2.448	0.456	0.232	0.211	0.042	0.071	0.843	0.016	7.934
HN2	32.353	0.473	3.667	41.100	3.300	0.231	0.537	0.027	0.107	0.014	0.008	0.154	0.008	4.290	2.310	0.502	0.845	0.233	0.092	1.451	0.005	0.040	0.411	0.029	0.020	0.254	0.387	0.036	0.020	0.157	0.009	0.072	0.153	0.246	2.678	0.529	0.252	0.159	0.036	0.042	0.904	0.015	7.544
HN3	33.380	0.437	3.563	42.960	3.770	0.260	0.434	0.027	0.092	0.015	0.008	0.156	0.008	4.263	2.452	0.405	0.796	0.234	0.083	1.591	0.006	0.044	0.354	0.033	0.028	0.192	0.463	0.035	0.020	0.194	0.011	0.101	0.144	0.214	2.102	0.340	0.291	0.192	0.037	0.015	0.824	0.011	7.820
HN4	33.327	0.500	3.527	33.820	4.130	0.239	0.485	0.028	0.103	0.017	0.007	0.173	0.008	4.432	2.608	0.466	0.873	0.235	0.079	1.646	0.005	0.060	0.393	0.035	0.022	0.241	0.406	0.037	0.019	0.179	0.011	0.099	0.154	0.188	1.859	0.436	0.209	0.177	0.043	0.043	0.865	0.011	7.640
HN5	33.160	0.427	3.580	37.280	4.590	0.306	0.574	0.027	0.092	0.014	0.007	0.157	0.009	4.483	2.542	0.569	0.828	0.278	0.078	1.595	0.008	0.057	0.364	0.033	0.026	0.230	0.514	0.034	0.021	0.163	0.010	0.141	0.152	0.270	1.933	0.485	0.227	0.193	0.048	0.041	0.794	0.012	8.007
HN6	33.340	0.493	3.677	50.480	2.570	0.297	0.553	0.028	0.098	0.014	0.007	0.163	0.009	4.392	2.550	0.550	0.928	0.265	0.083	1.581	0.010	0.071	0.424	0.035	0.032	0.166	0.448	0.034	0.022	0.173	0.010	0.107	0.181	0.303	2.112	0.425	0.255	0.155	0.069	0.051	0.948	0.012	7.097
HN7	33.263	0.427	3.550	46.910	3.210	0.231	0.535	0.028	0.091	0.011	0.008	0.153	0.012	4.400	2.752	0.538	0.761	0.253	0.082	1.497	0.014	0.069	0.219	0.036	0.023	0.202	0.586	0.039	0.017	0.181	0.012	0.125	0.166	0.240	1.646	0.470	0.215	0.169	0.071	0.038	0.786	0.013	7.768
YN1	31.423	1.017	4.767	61.560	1.390	0.603	0.497	0.034	0.107	0.007	0.008	0.034	0.001	3.299	1.141	0.457	1.073	0.208	0.088	1.710	0.034	0.091	0.115	0.088	0.027	0.312	0.713	0.040	0.133	0.125	0.001	0.201	0.287	0.416	1.754	0.138	0.043	0.110	0.011	0.115	0.920	0.014	8.605
YN2	31.877	0.950	5.157	42.920	1.490	0.485	0.512	0.036	0.108	0.009	0.009	0.050	0.002	3.193	1.120	0.557	0.936	0.202	0.080	1.720	0.032	0.079	0.131	0.008	0.013	0.263	0.702	0.043	0.311	0.115	0.000	0.187	0.299	0.512	1.657	0.166	0.030	0.125	0.026	0.118	1.171	0.021	9.024
YN3	31.907	0.937	5.227	57.400	1.170	0.607	0.482	0.040	0.132	0.008	0.008	0.043	0.002	2.922	1.139	0.448	1.121	0.189	0.101	1.637	0.021	0.071	0.133	0.063	0.035	0.252	0.734	0.022	0.255	0.139	0.000	0.187	0.487	0.536	1.695	0.138	0.059	0.109	0.028	0.112	1.453	0.012	8.695
YN4	31.820	0.943	5.287	52.270	1.540	0.729	0.468	0.037	0.122	0.006	0.008	0.022	0.004	3.188	1.080	0.447	1.051	0.194	0.089	1.711	0.036	0.068	0.131	0.065	0.044	0.321	0.880	0.035	0.241	0.159	0.001	0.145	0.343	0.469	1.777	0.130	0.040	0.142	0.026	0.138	0.840	0.018	8.813
YN5	31.940	1.040	5.087	55.560	1.260	0.767	0.547	0.044	0.131	0.007	0.009	0.048	0.005	3.368	1.090	0.512	1.213	0.206	0.112	1.740	0.047	0.072	0.130	0.053	0.037	0.278	0.765	0.038	0.335	0.159	0.000	0.175	0.482	0.546	1.649	0.139	0.056	0.151	0.032	0.132	1.054	0.026	9.218
YN6	32.097	0.957	4.910	60.020	1.360	0.839	0.399	0.031	0.109	0.005	0.009	0.016	0.002	3.149	0.933	0.424	1.099	0.173	0.089	1.723	0.045	0.063	0.135	0.037	0.021	0.246	0.749	0.036	0.279	0.143	0.000	0.139	0.432	0.488	1.498	0.148	0.056	0.128	0.022	0.133	1.186	0.016	8.885
YN7	32.200	0.950	4.977	51.140	1.840	0.845	0.528	0.034	0.047	0.007	0.009	0.171	0.002	3.208	1.062	0.379	0.974	0.169	0.088	1.710	0.059	0.056	0.125	0.051	0.023	0.294	0.760	0.048	0.295	0.118	0.001	0.050	0.505	0.082	1.355	0.147	0.036	0.126	0.029	0.140	0.939	0.020	8.970

X1-X43: L* value, a* value, b* value, ascorbic acid, S-methyl-L-cysteine, quercitrin, propene, propene sulfide, 2-propen-1-ol, di(1-propenyl) sulfide, 2-ethylthiophene, methyl propenyl disulfide, dimethyl trisulfide, diallyl disulfide, diallyl tetrasulphide, (Z)-benzaldoxime, 3-vinyl-1,2-dithiacyclohex-4-ene, diallyl trisulfide, 3-vinyl-1,2-dithiacyclohex-5-ene, propionic acid, 1,3-propanediol, L-alanine, ethanimidic acid, serine, L-threonine, L-proline, n.-octanoic acid, xylulose, ornithine, glutamic acid, arabinose, L-asparagine, lanthionine, L-tyrosine, isocitric acid, D-fructose, D-glucose, L-lysine, gluconic acid, L-homoserine, myo-inositol, succinylacetone, sucrose.