

Figure S1. HPLC chromatograms of individual anthocyanins cyanidin 3-glucoside and cyanidin 3-(6''-malonylglucoside).

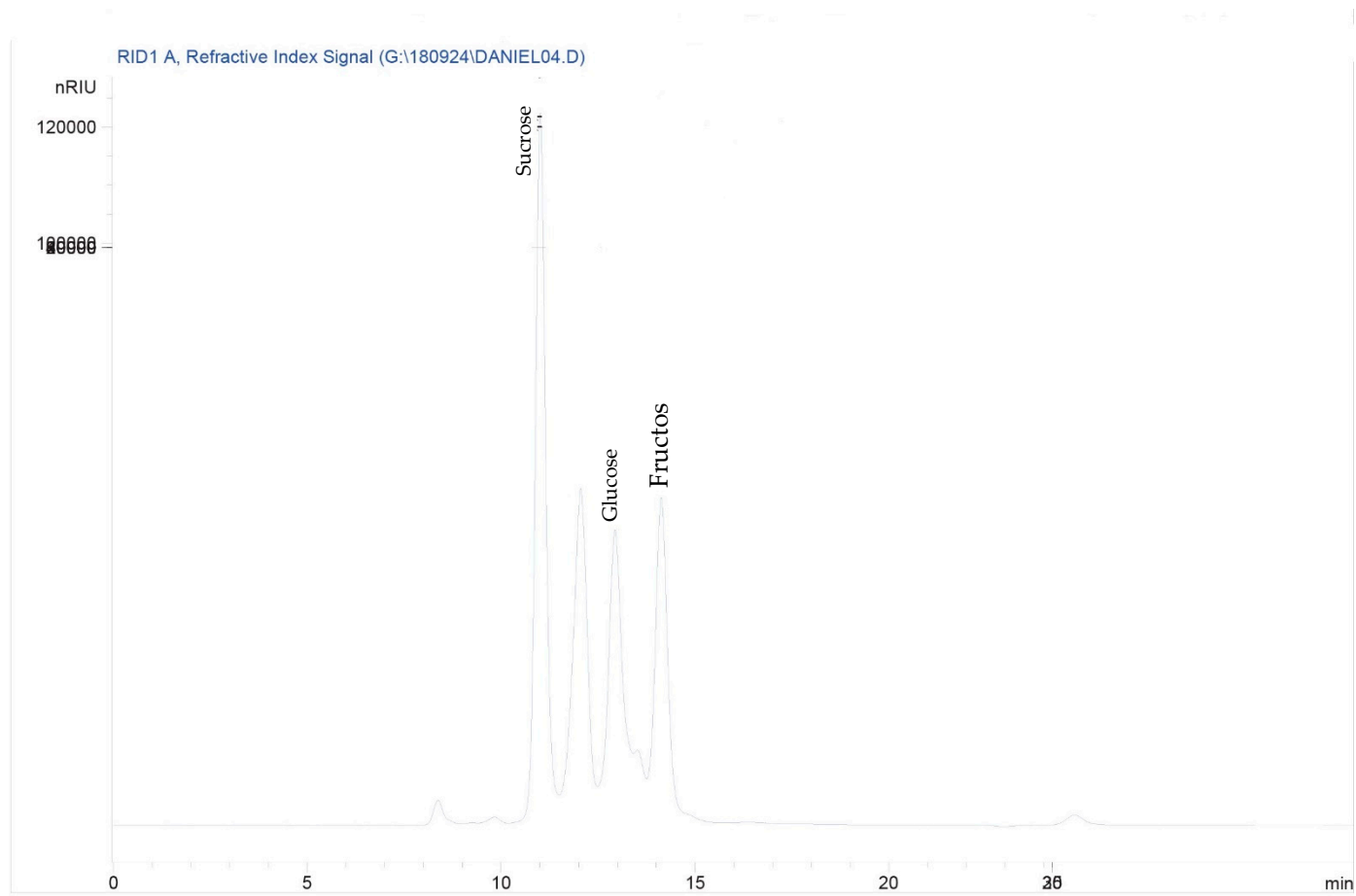


Figure S2. HPLC chromatograms of individual sugars (sucrose, glucose and fructose).

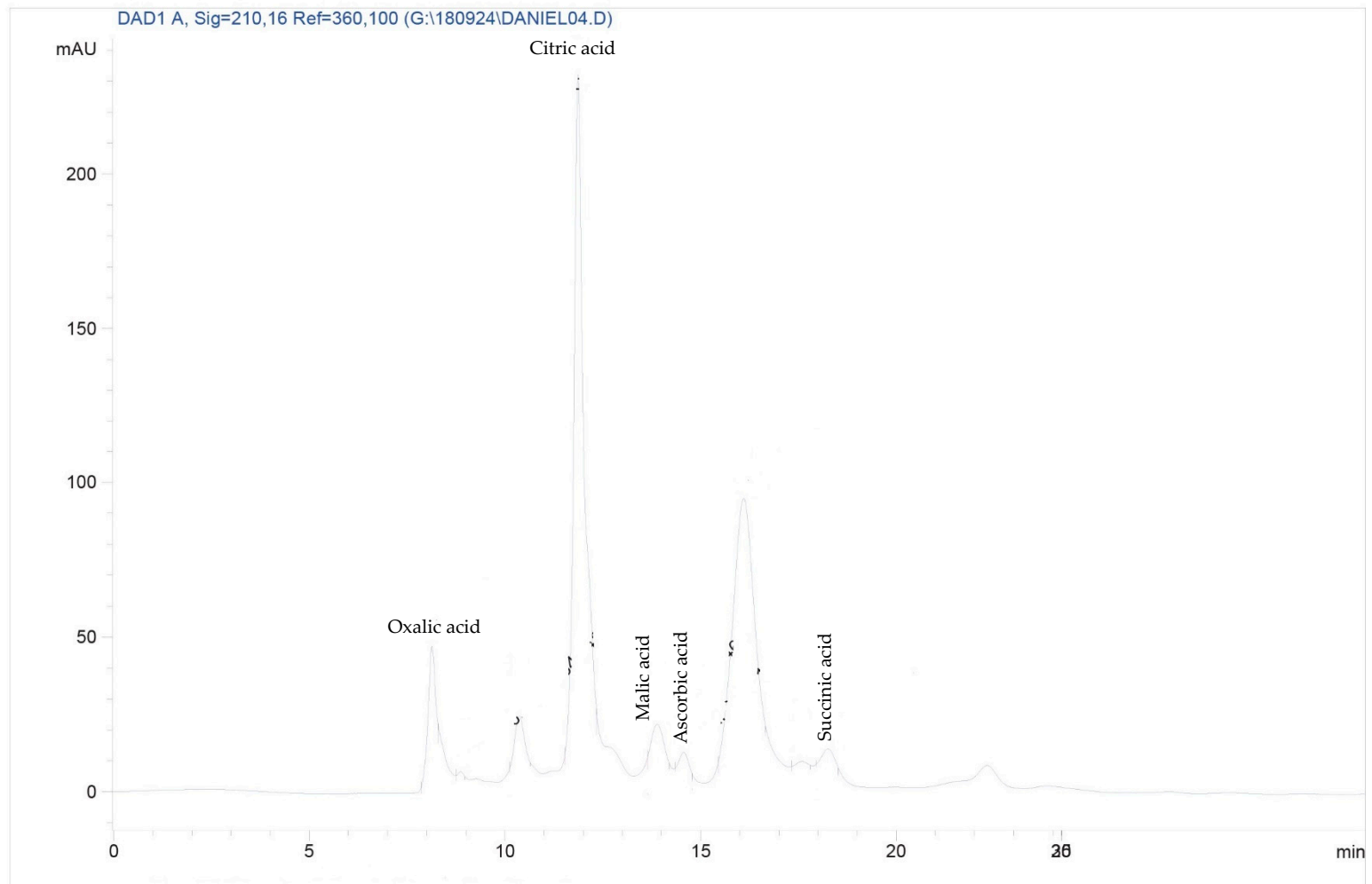


Figure S3. HPLC chromatograms of individual organic acids (citric, ascorbic, malic, oxalic and succinic acids).

**Table S1. Precision and recovery of the HPLC for determination of individual anthocyanins.**

Individual anthocyanins	Parameters	Sample No.	Concentration ( $\mu\text{g/mL}$ )	Mean	Standard deviation (SD)	Precision (% RSD)	Recovery (%)
Cyanidin 3-glucoside	Intra-day (n=3)	1	0.663	0.659	0.022	3.338	99.4
		2	0.661	0.657	0.017	2.587	99.39
		3	0.689	0.685	0.046	6.715	99.42
	Inter-day (n=3)	1	0.663	0.665	0.031	4.661	100.3
		2	0.661	0.665	0.016	2.406	100.61
		3	0.689	0.675	0.042	6.222	97.97
Cyanidin 3-(6"-malonylglucoside)	Intra-day (n=3)	1	7.912	7.909	0.441	5.575	99.96
		2	7.901	7.894	0.353	4.471	99.91
		3	8.238	8.221	0.226	2.749	99.79
	Inter-day (n=3)	1	7.912	7.911	0.338	4.272	99.99
		2	7.901	7.989	0.447	5.595	101.11
		3	8.238	8.229	0.417	5.067	99.89

**Table S2. Precision and recovery of the HPLC for determination of individual sugars.**

Individual sugars	Parameters	Sample No.	Concentration ( $\mu\text{g/mL}$ )	Mean	Standard deviation (SD)	Precision (% RSD)	Recovery (%)
Sucrose	Intra-day (n=3)	1	4.842	4.822	0.076	1.576	99.59
		2	4.843	4.837	0.106	2.191	99.88
		3	4.601	4.543	0.089	1.959	98.74
	Inter-day (n=3)	1	4.842	4.873	0.112	2.298	100.64
		2	4.843	4.848	0.108	2.227	100.1
		3	4.601	4.499	0.048	1.066	97.78
Glucose	Intra-day (n=3)	1	2.152	2.144	0.088	4.104	99.63
		2	2.202	2.191	0.094	4.29	99.50
		3	2.165	2.157	0.065	3.013	99.63
	Inter-day (n=3)	1	2.152	2.126	0.075	3.527	98.79
		2	2.202	2.169	0.068	3.135	98.50
		3	2.165	2.136	0.084	3.932	98.66
Fructose	Intra-day (n=3)	1	2.622	2.608	0.052	1.993	99.47
		2	2.583	2.573	0.027	1.049	99.61
		3	2.635	2.628	0.031	1.179	99.73
	Inter-day (n=3)	1	2.622	2.592	0.055	2.121	98.86
		2	2.583	2.532	0.045	1.777	98.03
		3	2.635	2.611	0.028	1.072	99.09

**Table S3. Precision and recovery of the HPLC for determination of individual organic acids.**

Individual sugars	Parameters	Sample No.	Concentration ( $\mu\text{g/mL}$ )	Mean	Standard deviation (SD)	Precision (% RSD)	Recovery (%)
Oxalic acid	Intra-day (n=3)	1	0.375	0.361	0.018	4.986	96.27
		2	0.365	0.378	0.021	5.555	103.56
		3	0.377	0.364	0.025	6.868	96.55
	Inter-day (n=3)	1	0.375	0.359	0.019	5.292	95.73
		2	0.365	0.359	0.025	6.963	98.36
		3	0.377	0.369	0.011	2.981	97.88
Citric acid	Intra-day (n=3)	1	0.477	0.462	0.015	3.246	96.86
		2	0.463	0.451	0.018	3.991	97.41
		3	0.469	0.465	0.016	3.441	99.15
	Inter-day (n=3)	1	0.477	0.459	0.014	3.051	96.23
		2	0.463	0.456	0.015	3.289	98.49
		3	0.469	0.454	0.014	3.083	96.80
Malic acid	Intra-day (n=3)	1	38.66	38.38	1.877	4.89	99.28
		2	37.54	37.08	1.631	4.398	98.77
		3	37.43	37.29	1.71	4.585	99.63
	Inter-day (n=3)	1	38.66	37.65	1.644	4.366	97.39
		2	37.54	36.58	1.559	4.261	97.44
		3	37.43	36.91	1.498	4.058	98.61
Ascorbic acid	Intra-day (n=3)	1	15.56	15.27	0.546	3.575	98.14
		2	15.63	15.55	0.525	3.376	99.49
		3	15.54	15.41	0.505	3.277	99.16
	Inter-day (n=3)	1	15.56	15.22	0.592	3.889	97.81
		2	15.63	15.19	0.491	3.232	97.18
		3	15.54	15.46	0.515	3.331	99.49
Succinic acid	Intra-day (n=3)	1	37.96	37.11	1.659	4.47	97.76
		2	38.93	38.63	1.397	3.616	99.23
		3	38.88	38.22	1.232	3.223	98.30
	Inter-day (n=3)	1	37.96	36.97	1.575	4.26	97.39
		2	38.93	37.84	1.681	4.442	97.20
		3	38.88	36.73	1.768	4.813	94.47