Supplementary File

Effect of Apple Juice Enrichment with Selected Plant Materials: Focus on Bioactive Compounds and Antioxidant Activity

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Table S1. Spearman correlation coefficients and significance level ($p \leq 0.05$ and $p \leq 0.01$, see legend at the bottom of the table).

	L*	a*	b*	DM[1]	Ashes	TSS[2]	TA[3]	TSS[2]/TA[3]	pH	Vitamin C	Fructose	Sorbitol	Glucose	Sucrose	Total sugars
a*	-0.2063														
b*	0.9567	0.0324													
DM[1]	-0.1847	0.7826	0.0424												
Ashes	-0.5372	0.3853	-0.3666	0.7654											
TSS[2]	-0.2300	0.8895	0.0100	0.9795	0.6894										
TA[3]	-0.0928	0.8830	0.1536	0.9617	0.6055	0.9791									
TSS[2]/TA[3]	-0.5070	0.3221	-0.3320	0.4641	0.6744	0.4598	0.3465								
pH	-0.5726	0.4268	-0.4483	0.7601	0.8651	0.7002	0.6516	0.3220							
Vitamin C	0.4205	0.7632	0.5984	0.5339	-0.0759	0.6206	0.6818	0.0689	-0.0933						
Fructose	-0.2752	0.7402	-0.1659	0.6974	0.4634	0.7456	0.6833	0.0335	0.6100	0.4089					
Sorbitol	0.1211	0.7195	0.2157	0.6067	0.1750	0.6625	0.6536	-0.1802	0.3218	0.6526	0.9118				
Glucose	-0.5635	0.8817	-0.3837	0.6980	0.4642	0.8079	0.7222	0.4770	0.5234	0.4943	0.7376	0.5799			
Sucrose	0.3509	0.6335	0.5795	0.8223	0.4588	0.7850	0.8519	0.2942	0.3533	0.7334	0.3788	0.4993	0.3272		
Total sugars	-0.3383	0.8280	-0.1983	0.7543	0.4948	0.8186	0.7512	0.1561	0.6196	0.4784	0.9844	0.8829	0.8417	0.4212	
Oxalic acid	-0.3971	0.2137	-0.2710	0.7358	0.9299	0.6144	0.5569	0.5761	0.8591	-0.1245	0.3107	0.0636	0.3051	0.4761	0.3357
Citric acid	-0.4173	0.2423	-0.2814	0.7477	0.9427	0.6322	0.5745	0.5955	0.8667	-0.1129	0.3210	0.0677	0.3295	0.4838	0.3501
Tartaric	0.4562	-0.4357	0.2604	-0.2556	-0.2635	-0.3389	-0.3366	-0.6634	-0.1400	-0.1992	0.1680	0.3100	-0.4726	-0.1784	0.0077
Malic acid	-0.4280	0.9264	-0.2074	0.8721	0.5816	0.9410	0.9092	0.4124	0.6870	0.5578	0.7503	0.6175	0.9291	0.5711	0.8434
Quinic acid	0.2434	0.8759	0.4388	0.5720	0.0026	0.6860	0.7269	0.0890	0.0094	0.9668	0.5600	0.7398	0.6340	0.6723	0.6288
Shikimic acid	-0.7421	0.2783	-0.6441	0.6401	0.8906	0.5789	0.4626	0.6343	0.8801	-0.2325	0.4114	0.0629	0.5394	0.1785	0.4606

Total organic acids	-0.1967	0.7911	0.0313	0.9993	0.7619	0.9828	0.9604	0.4846	0.7502	0.5430	0.6964	0.6043	0.7163	0.8163	0.7579
Sugar/organic acids	-0.3064	0.2543	-0.3789	-0.0693	-0.1243	0.0351	-0.0454	-0.3571	0.0810	-0.0083	0.6593	0.5927	0.3773	-0.3751	0.5969
TP[4]	-0.1336	0.1113	-0.1657	0.4895	0.5123	0.3933	0.3380	-0.1535	0.6897	-0.1157	0.6828	0.5662	0.1840	0.2010	0.5880
CUPRAC	0.0189	-0.1489	-0.0665	0.2628	0.2772	0.1408	0.1658	-0.4403	0.5953	-0.2755	0.3539	0.2847	-0.1287	0.0814	0.2462
FRAP	-0.2869	0.1583	-0.2827	0.6065	0.6212	0.5025	0.4584	0.0216	0.8430	-0.1290	0.5593	0.3812	0.2899	0.2583	0.5187
ORAC	-0.6689	0.0815	-0.6553	0.3950	0.7593	0.3254	0.2228	0.2014	0.8425	-0.4837	0.5302	0.1879	0.2843	-0.0664	0.4798
DPPH•	-0.1806	-0.0668	-0.2141	0.4465	0.5150	0.3114	0.3030	-0.0852	0.7572	-0.2735	0.3114	0.1574	0.0426	0.1822	0.2588
ABTS•+	-0.1988	0.0673	-0.2105	0.5558	0.5887	0.4332	0.4027	-0.0387	0.8032	-0.1703	0.4926	0.3380	0.1703	0.2587	0.4365
Total anthocyanins	-0.8219	0.2854	-0.8446	0.0102	0.1147	0.1286	-0.0116	0.2116	0.2540	-0.1734	0.4055	0.1460	0.6532	-0.4972	0.4595
Total hydroxybenzoic acids	-0.0828	0.7913	0.1409	0.9737	0.6548	0.9646	0.9480	0.4925	0.6204	0.6563	0.6317	0.6000	0.7061	0.8539	0.7071
Total hydroxycinnamic acids	0.1596	0.7637	0.2984	0.3263	-0.2720	0.4773	0.5461	-0.1104	-0.1035	0.8486	0.3758	0.5504	0.5877	0.3893	0.4608
Dihydrochalcones	-0.1248	0.2374	-0.1257	-0.3746	-0.5336	-0.2010	-0.1552	-0.3773	-0.3464	0.1376	0.0449	0.0899	0.1784	-0.3840	0.0654
Total flavan-3-ols	-0.6137	0.5208	-0.5986	0.1765	0.0120	0.3206	0.2160	0.1184	0.2134	0.1873	0.5488	0.4018	0.7936	-0.2557	0.6184
Polymeric proanthocyanidins	0.2051	0.0819	0.1769	0.5042	0.3769	0.3880	0.3710	-0.2003	0.5061	0.0980	0.5655	0.5867	0.0530	0.4003	0.4729
Total flavonols	-0.7466	0.2848	-0.6814	-0.0442	0.2065	0.0680	0.0109	0.1542	0.2697	-0.2702	0.2513	-0.0191	0.4101	-0.3769	0.2816
Total polyphenols (UPLC-PDA)	-0.1461	0.3956	-0.1168	0.6861	0.5345	0.6309	0.5683	-0.0113	0.7035	0.1847	0.8246	0.7380	0.4610	0.3817	0.7769
Colour	0.1999	0.1625	0.1340	-0.3462	-0.7377	-0.1936	-0.1970	-0.2497	-0.6499	0.4481	-0.0201	0.1894	0.2067	-0.2641	0.0293
Aroma	0.7193	-0.2871	0.6175	-0.4715	-0.7745	-0.4424	-0.3894	-0.2616	-0.8742	0.3498	-0.4803	-0.1319	-0.3894	-0.0573	-0.4717
Taste	0.6349	-0.4412	0.4441	-0.6728	-0.9133	-0.6368	-0.5920	-0.5556	-0.8681	0.1231	-0.4159	-0.1004	-0.4751	-0.3577	-0.4554
Consistency	-0.1493	-0.0830	-0.3196	-0.0396	-0.1471	-0.0355	-0.1319	-0.2813	0.0980	-0.0931	0.3844	0.3587	0.2085	-0.3450	0.3400
Desirability	0.5393	-0.2863	0.4167	-0.6652	-0.9193	-0.5804	-0.5306	-0.3620	-0.9479	0.2372	-0.5012	-0.1990	-0.3432	-0.3227	-0.4877
	L*	**a***	**b***	**DM[1]**	**Ashes**	**TSS[2]**	**TA[3]**	**TSS[2]/TA[3]**	**pH**	**Vitamin C**	**Fructose**	**Sorbitol**	**Glucose**	**Sucrose**	**Total sugars**

	Oxalic acid	**Citric acid**	**Tartaric acid**	**Malic acid**	**Quinic acid**	**Shikimic acid**	**Total acids**	**Sugar/ Organic acids**	**TP[4]**	**CUPRAC**	**FRAP**	**ORAC**	**DPPH•**	**ABTS•+**
Citric acid	0.9989													
Tartaric acid	-0.1701	-0.2039												
Malic acid	0.4810	0.5040	-0.4648											
Quinic acid	-0.1237	-0.1041	-0.2440	0.6683										
Shikimic acid	0.8936	0.8986	-0.2842	0.5819	-0.1572									
Total organic acids	0.7299	0.7421	-0.2721	0.8800	0.5810	0.6443								
Sugar/Organic acids	-0.3269	-0.3207	0.3848	0.1891	0.1807	-0.0379	-0.0669							

TP[4]	0.5693	0.5504	0.5996	0.2900	-0.0696	0.5258	0.4747	0.3788						
CUPRAC	0.4599	0.4342	0.5948	0.0738	-0.2852	0.3504	0.2385	0.1473	0.8562					
FRAP	0.7590	0.7417	0.2967	0.4446	-0.1120	0.7321	0.5953	0.1177	0.9006	0.8609				
ORAC	0.6889	0.6914	0.1497	0.3268	-0.3378	0.7925	0.3838	0.3445	0.7503	0.5985	0.7430			
DPPH•	0.7264	0.7034	0.3201	0.2438	-0.3019	0.6396	0.4302	-0.0709	0.8118	0.9160	0.9549	0.6611		
ABTS•+	0.7486	0.7280	0.3699	0.3478	-0.1725	0.6763	0.5412	0.0636	0.9086	0.9035	0.9916	0.7216	0.9750	
Total anthocyanins	-0.0399	-0.0253	-0.2483	0.3992	0.0058	0.4087	0.0307	0.6579	0.0829	-0.1203	0.1287	0.3863	-0.0398	0.0209
Total hydroxybenzoic acids	0.6520	0.6610	-0.2826	0.8525	0.6571	0.5523	0.9788	-0.1348	0.3852	0.1479	0.5163	0.2135	0.3533	0.4619
Total hydroxycinnamic acids	-0.3460	-0.3268	-0.3541	0.5950	0.8845	-0.2744	0.3371	0.2085	-0.2644	-0.3008	-0.2087	-0.4679	-0.3353	-0.2792
Dihydrochalcones	-0.7301	-0.7039	-0.2445	0.0520	0.2805	-0.4915	-0.3711	0.5103	-0.4825	-0.4038	-0.5566	-0.2947	-0.5998	-0.6041
Total flavan-3-ols	-0.1144	-0.1010	-0.2417	0.5784	0.3379	0.2901	0.1987	0.6669	0.0904	-0.1186	0.1438	0.1882	-0.0580	0.0263
Polymeric proanthocyanidins	0.5090	0.4820	0.6720	0.2037	0.0573	0.3397	0.4898	0.1662	0.9247	0.8124	0.8230	0.4734	0.7646	0.8539
Total flavonols	-0.0715	-0.0356	-0.4303	0.2934	-0.0339	0.2327	-0.0422	0.4974	-0.1420	-0.2287	-0.1488	0.4173	-0.2461	-0.2192
Total polyphenols (UPLC-PDA)	0.5733	0.5598	0.4257	0.5465	0.2302	0.5633	0.6801	0.3875	0.9354	0.7113	0.8818	0.6275	0.7272	0.8566
Colour	-0.7722	-0.7723	-0.0322	-0.0248	0.4360	-0.5603	-0.3229	0.3565	-0.4480	-0.4992	-0.5094	-0.6711	-0.5907	-0.5610
Aroma	-0.6516	-0.6709	0.1985	-0.4922	0.1729	-0.7465	-0.4583	-0.2254	-0.4954	-0.4230	-0.5722	-0.8937	-0.5053	-0.5366
Taste	-0.7926	-0.8174	0.4389	-0.6165	-0.0090	-0.7999	-0.6647	0.0687	-0.3427	-0.2177	-0.4857	-0.7422	-0.4076	-0.4455
Consistency	-0.0394	-0.0674	0.5401	0.0538	-0.0884	0.1754	-0.0294	0.5587	0.5532	0.4430	0.4938	0.2368	0.4037	0.4619
Desirability	-0.8706	-0.8806	0.0955	-0.5136	0.1288	-0.8357	-0.6505	-0.0192	-0.6508	-0.5416	-0.7380	-0.8912	-0.6763	-0.7218
	Oxalic acid	**Citric acid**	**Tartaric acid**	**Malic acid**	**Quinic acid**	**Shikimic acid**	**Total acids**	**Sugar/ Organic acids**	**TP[4]**	**CUPRAC**	**FRAP**	**ORAC**	**DPPH•**	**ABTS•+**

	Total anthocyanins	**Total hydroxybenzoic acids**	**Total hydroxycinnamic acids**	**Dihydrochalcones**	**Total flavan-3-ols**	**Polymeric proanthocyanidins**	**Total flavonols**	**Total Polyphenols (UPLC-PDA)**	**Colour**	**Aroma**	**Taste**	**Consistency**
Total hydroxybenzoic acids	-0.0182											
Total hydroxycinnamic acids	0.1698	0.4196										
Dihydrochalcones	0.4118	-0.3918	0.5591									
Total flavan-3-ols	0.9217	0.1984	0.5007	0.4589								
Polymeric proanthocyanidins	-0.2063	0.4643	-0.1810	-0.6260	-0.1047							
Total flavonols	0.6685	-0.1801	0.0902	0.6503	0.4969	-0.4887						

Total polyphenols (UPLC-PDA)	0.1790	0.6325	0.0259	-0.4371	0.2902	0.8993	-0.1694					
Colour	0.3415	-0.1834	0.6391	0.5682	0.5431	-0.3572	-0.0479	-0.2526				
Aroma	-0.3593	-0.2725	0.2343	0.0453	-0.1886	-0.1942	-0.6386	-0.4125	0.6864			
Taste	-0.1881	-0.5191	0.1438	0.2055	-0.0663	-0.1299	-0.4987	-0.3415	0.7280	0.9117		
Consistency	0.5000	0.0025	-0.0118	-0.1253	0.5612	0.5135	-0.2005	0.5914	0.3684	0.1079	0.3386	
Desirability	-0.1192	-0.4938	0.3150	0.3976	0.0056	-0.4545	-0.3132	-0.5873	0.8257	0.9220	0.9261	0.0905
	Total anthocyanins	**Total hydroxybenzoic acids**	**Total hydroxycinnamic acids**	**Dihydrochal-cones**	**Total flavan-3-ols**	**Polymeric proanthocyanidins**	**Total flavonols**	**Total Polyphenols (UPLC-PDA)**	**Colour**	**Aroma**	**Taste**	**Consistency**

Legend

DM[1]	Dry matter		
TSS[2]	Total soluble solids		significant at $p \leq 0.05$
TA[3]	Total acidity		significant at $p \leq 0.01$
TP[4]	Total phenols by Folin-Chiocalteu's assay		

Table S2. Quantification of phenolic compounds by UPLC-PDA method (mg/100 g fw).

Code	Compound	R_t (min)	λ_{max} (nm	MS [M-H]$^-$ (m/z)*	MS/MS [M-H]$^-$ (m/z)	Juice composition (mg/100 g fw)						
						AJ	**AJ+S01**	**AJ+S05**	**AJ+M5**	**AJ+F5**	**AJ+P5**	**AJ+C5**
Anthocyanins												
A1	Delphinidin-3,5-*O*-diglucoside	3.040	518	627.2785$^+$	465.1909/303.1100	nd	0.17±0.01b	1.77±0.02a	nd	nd	nd	nd
A2	Delphinidin-3-*O*-glucoside	3.856	515	465.1953$^+$	303.1100	nd	nd	0.37±0.04b	10.55±0.31a	nd	nd	nd
A3	Delphinidin-pentoside	4.133	520	435.1818$^+$	303.1100	nd	nd	nd	0.23±0.02a	nd	nd	nd
A4	Cyanidin-3-*O*-galactoside	4.135	515	449.1959$^+$	287.1116	nd	nd	nd	nd	nd	nd	1.04±0.11a
A5	Cyanidin-3-*O*-glucoside	4.397	520	449.1959$^+$	287.1116	nd	nd	nd	3.32±0.26b	3.69±0.36a	nd	nd
A6	Cyanidin-3-*O*-arabinoside	4.629	515	419.1797$^+$	287.1116	nd	nd	nd	nd	nd	nd	0.04±0.00a
A7	Petunidin-3-*O*-glucoside	4.648	525	479.2150$^+$	317.1295	nd	nd	nd	0.83±0.11a	nd	nd	nd
A8	Peonidin-3-*O*-glucoside	5.156	525	463.2164$^+$	301.1330	nd	nd	nd	0.04±0.00a	nd	nd	nd
A9	Malvidin-3-*O*-glucoside	5.391	519	493.2339$^+$	331.1495	nd	nd	nd	17.05±0.24a	nd	nd	nd
Total						**nd**	**0.17±0.01e**	**2.14±0.03c**	**32.02±0.15a**	**3.69±0.36b**	**nd**	**1.08±0.05d**
Hydroxybenzoic acids												
B1	Gallic acid glucoside I	1.156	280	331.1266	271.1605/169.1417	nd	nd	nd	nd	nd	nd	1.03±0.02a
B2	Galloyl glucoside I	1.274	277	331.1334	169.0417	nd	nd	nd	nd	nd	nd	2.06±0.02a
B3	Galloyl HHDP-glucose I	1.325	271	633,1283	481.0828/301.0667	nd	nd	nd	2.52±0.03a	nd	nd	nd
B4	Galloyl glucoside II	1.331	270	331,0639	169.0117	nd	nd	nd	nd	nd	1.10±0.01a	nd
B5	Gallic acid glucoside II	1.366	270	331.1334	271.1990/169.1417	nd	nd	nd	nd	nd	nd	0.54±0.01a
B6	3-*O*-Galloylquinic acid (Theogallin)	1.551	273	343.0742	191.1410	nd	nd	nd	nd	nd	nd	23.10±0.74a
B7	Galloyl HHDP-glucose II	1.591	272	633,1283	481.0828/301.0667	nd	nd	nd	2.43±0.06a	nd	nd	nd
B8	Galloyl glucoside III	1.627	273	331,0639	169.0117	nd	nd	nd	nd	nd	1.70±0.12a	nd
B9	Digalloyl-HHDP-glucose	1.892	280	785,1292	633.0180/481.0828/301.0631	nd	nd	nd	0.39±0.02a	nd	nd	nd
B10	Gallic acid 4-*O*-β-D-glucopyranoside	2.080	320	331.1334	169.0417	nd	nd	nd	nd	nd	nd	0.03±0.00a
B11	Castalagin	2.084	280	933.1019	785.1813/481.0917/301.1057	nd	nd	nd	nd	7.87±0.52a	nd	nd
B12	Galloyl shikimic acid	2.314	272	325.0878	169.0417/125.4180	nd	nd	nd	nd	nd	nd	0.70±0.09a
B13	Casuarin	2.420	374	783.1445	481.0421/301.0667	nd	nd	nd	nd	1.15±0.03a	nd	nd

B14	Ellagitannin I	2.435	280	933.1457	633.0283/481.0783/301.0667	nd	nd	nd	0.13±0.01a	nd	nd	nd
B15	Digalloylquinic acid I	2.755	273	495.1837	343.1255/191.3072	nd	nd	nd	nd	nd	nd	0.21±0.03a
B16	Ellagitannin II	2.829	270	933.1114	781.0445/633.7131/301.1057	nd	nd	nd	nd	9.34±0.12a	nd	nd
B17	Ellagitannin III	3.035	275	783.0645	481.0186/301.1021	nd	nd	nd	1.50±0.21a	nd	nd	nd
B18	Digalloylquinic acid II	3.210	276	495.0435	343.1158/191.3100	nd	nd	nd	nd	nd	nd	0.26±0.02a
B19	Ellagitannin IV	3.331	280	783.0759	481.0917/301.0667	nd	nd	nd	nd	0.64±0.03a	nd	nd
B20	Nilocitin	3.653	270	481.0938	301.0667/257.1438	nd	nd	nd	nd	0.26±0.02a	nd	nd
B21	Digalloyl shikimic acid I	4.129	278	477.0493	325.0808/169.0417	nd	nd	nd	nd	nd	nd	0.98±0.08a
B22	Casuarinin	4.391	278	935.0146	765.1799/545.1230	nd	nd	nd	nd	3.56±0.23a	nd	nd
B23	Digalloyl shikimic acid II	4.618	275	477.0493	325.0806/169.0417	nd	nd	nd	nd	nd	nd	0.18±0.02a
B24	Strictinin ellagitannin	4.700	275	633.0900	463.1637/301.0667/275.1263	nd	nd	nd	nd	nd	nd	0.21±0.01a
B25	Ellagic acid arabinoside	5.703	359	433.0224	301.0631	nd	nd	nd	nd	0.87±0.06a	nd	nd
B26	Ellagic acid xyloside	5.885	361	433.0735	301.0631	nd	nd	nd	nd	0.52±0.03a	nd	nd
B27	Ellagic acid	6.028	366	300.0631		nd	nd	nd	nd	3.04±0.13a	nd	nd
B28	Methyl ellagic acid	8.128	360	394.0062	315.1020/301.0631	nd	nd	nd	nd	1.11±0.24a	nd	nd
Total						**nd**	**nd**	**nd**	**6.97±0.13c**	**28.36±0.15b**	**2.80±0.05d**	**29.28±0.11a**
Hydroxycinnamic acids												
C1	Neochlorogenic acid	3.489	317	353.1287	191.3100/136.0212	0.33±0.03de	0.55±0.09a	0.27±0.02e	0.46±0.05b	0.45±0.02bc	0.37±0.01cd	0.42±0.02bc
C2	Chlorogenic acid	3.723	323	353.0838	191.0534	5.00±0.11c	5.43±0.06b	5.42±0.22b	5.46±0.32b	4.81±0.16c	5.10±0.21bc	6.62±0.21a
C3	Caffeic acid	4.036	320	311.0807	179.1098	0.20±0.02d	0.21±0.02cd	0.21±0.01cd	0.27±0.03b	0.33±0.01a	0.23±0.01cd	0.24±0.03bc
C4	*p*-Coumaric acid	4.463	323	163.0349		0.13±0.00c	0.14±0.01bc	0.15±0.01b	0.28±0.02a	0.10±0.02d	0.13±0.01c	0.15±0.00bc
C5	*p*-Coumaroyloquinic acid	4.904	310	337.0912	163.1014	0.92±0.11a	0.99±0.03a	1.01±0.00a	0.97±0.11a	0.93±0.08a	0.93±0.11a	0.99±0.03a
Total						**6.58±0.05e**	**7.32±0.03b**	**7.06±0.02c**	**7.44±0.04b**	**6.62±0.10de**	**6.76±0.13d**	**8.42±0.11a**
Dihydrochalcones												
D1	Phloretin-2'-*O*-xyloglucoside	7.433	280	567.1703	273.0757	2.08±0.42bc	2.22±0.04ab	2.43±0.10a	2.27±0.01ab	1.78±0.11c	2.10±0.04ab	2.23±0.06ab
D2	Phloretin-2'-*O*-glucoside (Phloridzin)	8.186	280	435.1332	273.0733	2.53±0.13b	2.74±0.17ab	2.76±0.05ab	2.89±0.12a	2.54±0.08b	2.61±0.11b	2.72±0.11ab
Total						**4.61±0.10c**	**4.96±0.08b**	**5.19±0.11a**	**5.16±0.09a**	**4.32±0.10d**	**4.71±0.12c**	**4.95±0.12b**
Flavan-3-ols												
E1	Procyanidin B1	3.256	280	577.1293	289.0708	1.49±0.06c	1.61±0.10c	1.13±0.11d	11.25±0.23a	1.09±0.11d	1.60±0.06c	2.00±0.02b

E2	Procyanidin B3	3.562	277	577.1055	289.2014/245.2391	nd	nd	nd	nd	nd	nd	0.06±0.00a
E3	(+)-Catechin	3.669	280	289.0673	245.0780	1.48±0.11e	1.79±0.05d	1.44±0.14e	2.18±0.22c	4.17±0.32b	1.92±0.06cd	5.72±0.14a
E4	(-)-Epiatechin	4.143	280	289.0673	245.0780	5.98±0.04d	7.20±0.22b	6.60±0.03c	7.20±0.05b	6.07±0.12d	6.83±0.11c	7.94±0.21a
E5	Procyanidin B2	4.631	280	577.1293	289.0708	1.65±0.11bc	1.79±0.06b	1.80±0.02b	6.43±0.11a	1.45±0.12d	1.76±0.04bc	1.62±0.12c
E6	Procyanidin C1	4.956	280	866.1908	577.1188/289.0708	0.40±0.01c	0.79±0.10a	0.61±0.03b	0.74±0.04a	0.44±0.02c	0.80±0.03a	0.62±0.04b
Total						**11.00±0.97d**	**13.18±0.79c**	**11.58±0.60d**	**27.80±1.24a**	**13.22±0.88c**	**12.91±0.67c**	**17.96±1.12b**
PP[#]	Polymeric proanthocyanidins					108.11±1.25e	109.15±2.56e	88.69±3.64f	118.40±2.54d	209.99±7.45b	242.68±3.56a	160.66±4.56c
DP	Degree of polymerisation					3.53	3.64	3.28	3.66	4.78	4.10	4.11
Flavonols												
F1	Kaempferol-3-*O*-sophoroside-7-*O*-glucoside	3.546	346	771.0181	609.0240/2851257	nd	0.39±0.02b	2.06±0.11a	nd	nd	nd	nd
F2	Quercetin-3,7-*O*-digalactoside	4.519	349	625.0223	463.0290/301.0951	nd	nd	0.06±0.00a	nd	nd	nd	nd
F3	Kaempferol-3,7-*O*-diglucoside	4.636	345	609.0341	447.0543/285.1292	nd	0.04±0.00b	0.15±0.01a	nd	nd	nd	nd
F4	Isorhamnetin-3,7-*O*-digalacto-side	4.747	350	639.0883	447.0327/315.0605	nd	0.24±0.03b	0.41±0.05a	nd	nd	nd	nd
F5	Quercetin derivative I	4.766	359	633.0900	463.0633/301.0667	nd	nd	nd	nd	0.09±0.00b	nd	0.21±0.02a
F6	Myricetin galactoside-gallate	4.995	360	631.1107	479.1073/317.1114	nd	nd	nd	1.75±0.10a	nd	nd	nd
F7	Quercetin-3,7-*O*-diglucoside	5.356	352	625.1044	463.0333/301.0924	nd	0.35±0.02b	2.26±0.22a	nd	0.09±0.02c	nd	nd
F8	Myricetin-3-*O*-galactoside	5.460	356	479.0610	317.1114	nd	nd	nd	9.85±0.54a	nd	nd	0.33±0.02b
F9	Myricetin-3-*O*-glucoside	5.534	356	479.0162	317.1114	nd	nd	nd	0.50±0.08a	nd	nd	0.25±0.03b
F10	Isorhametin-3,7-*O*-diglucoside	5.709	343	639.1035	477.1314/315.0948	nd	0.17±0.00b	1.18±0.02a	nd	nd	nd	nd
F11	Quercetin galloylhexose	5.816	360	615.1291	463.0950/301.1092	nd	nd	nd	nd	nd	nd	0.08±0.00a
F12	Kaempferol-3-*O*-sophoroside	5.978	358	609.0240	285.1226	nd	2.13±0.02b	11.84±0.35a	nd	nd	nd	nd
F13	Myricetin-3-*O*-arabinoside	6.027	364	449.0362	317.0678	nd	nd	nd	1.18±0.01a	nd	nd	nd
F14	Quercetin derivative II	6.053	366	633.1003	463.0861/301.1021	nd	nd	nd	nd	nd	nd	0.27±0.01a
F15	Isorhamnetin-3-*O*-sophoroside	6.158	352	639.0983	315.0948	nd	nd	0.20±0.01a	nd	nd	nd	nd
F16	Myricetin-3-*O*-xyloside	6.161	350	449.1883	317.1114	nd	nd	nd	nd	nd	nd	0.03±0.00a
F17	Myricerin-3-*O*-rhamnoside	6.239	347	463.0861	317.1114	nd	nd	nd	5.88±0.22a	nd	nd	0.02±0.00b
F18	Quercetin-3-*O*-galactoside	6.345	348	463.0861	301.0994	0.57±0.07d	0.67±0.12cd	0.57±0.03d	1.05±0.02b	1.28±0.04a	0.66±0.02cd	0.75±0.11c
F19	Quercetin-3-*O*-glucoside	6.494	350	463.1774	301.1447	0.10±0.00f	0.21±0.02c	0.40±0.01a	0.21±0.02bc	0.23±0.01b	0.14±0.00e	0.17±0.01d
F20	Kaempferol-3-*O*-galactoside	6.640	347	447.0629	285.1326	nd	nd	nd	nd	0.53±0.03a	nd	nd

F21	Isorhamnetin-3-*O*-rutinoside	6.697	352	623.1223	315.0871	nd	0.22±0.02b	1.32±0.06a	nd	nd	nd	nd
F22	Quercetin-3-*O*-arabinoside	6.765	350	433.0160	301.1421	0.14±0.00b	0.18±0.03b	0.16±0.00b	0.17±0.04b	0.27±0.03a	0.15±0.01b	0.15±0.01b
F23	Quercetin-pentoside	6.957	360	433.0565	301.0959	nd	nd	nd	nd	0.39±0.02a	nd	nd
F24	Quercetin-3-*O*-xyloside	7.063	350	433.0160	301.1421	0.32±0.04c	0.41±0.03b	0.36±0.04bc	0.42±0.01b	0.68±0.10a	0.41±0.01b	0.74±0.02a
F25	Quercetin-3-*O*-rhamnoside	7.325	348	447.0148	301.1447	0.50±0.03f	0.84±0.05d	1.52±0.11a	1.27±0.12b	0.53±0.03f	0.68±0.04e	1.07±0.06c
F26	Isorhanetin-3-*O*-glucoside	7.539	352	477.1314	315.0871	nd	nd	0.23±0.02a	nd	nd	nd	nd
F27	Kaempferol-hexoside	7.568	350	447.1543	285.1326	nd	nd	nd	nd	0.21±0.01a	nd	nd
F28	Myricetin	7.683	367	317.1114		nd	nd	nd	0.33±0.03a	nd	nd	nd
F29	Quercetin	8.774	360	301.1065		nd	nd	nd	nd	0.05±0.00a	nd	nd
F30	Kaempferol	9.435	360	285.1706		nd	nd	nd	nd	3.78±0.12a	nd	nd
Total						**1.63±0.06f**	**5.85±0.10c**	**22.72±0.13a**	**22.61±0.11a**	**8.12±0.05b**	**2.04±0.03e**	**4.07±0.06d**
Total phenolic compounds (including polymeric proanthocyanidins)						**131.93±3.45d**	**140.64±5.12c**	**137.37±3.44cd**	**220.40±8.21b**	**274.32±4.22a**	**271.90±3.03a**	**226.41±4.21b**

Data are given as mean ± standard deviation (n=3). nd: not detected. tr: traces. Mean values within a column with different letters (a-f) are significantly different (homogenous groups) at $p \leq 0.05$. * $[M+H]^+$ (m/z) for anthocyanins were obtained in the positive ion mode. # Quantitative data of polymeric proanthocyanidins were obtained using the phloroglucinol method.

Table S3. Consumer evaluation (5° hedonic scale).

Juice composition	Qualitative discriminate				
	Colour	Aroma	Taste	Consistency	Desirability
AJ	3.40±0.70a	4.60±0.70a	4.30±0.67a	2.90±1.20a	4.50±0.53a
AJ+S01	3.25±0.86ab	3.85±0.58ab	4.00±0.67a	2.90±1.20a	4.10±0.99a
AJ+S05	2.50±0.97ab	2.70±0.67bc	2.95±0.76ab	2.80±1.32a	3.20±0.79ab
AJ+M5	3.85±1.16a	2.90±1.10bc	3.40±1.17ab	3.00±1.25a	3.50±1.27ab
AJ+F5	1.60±0.84b	2.15±1.06c	2.15±1.06b	2.90±1.29a	1.85±1.11b
AJ+P5	2.95±0.83ab	3.60±0.52abc	4.15±0.47a	3.00±1.15a	3.55±1.07ab
AJ+C5	3.90±0.74a	4.10±0.74ab	3.75±0.86a	2.90±0.99a	4.00±1.33a

Data are given as mean ± standard deviation (n=3). Mean values within a column with different letters (a-c) are significantly different (homogenous groups) at $p \leq 0.05$.

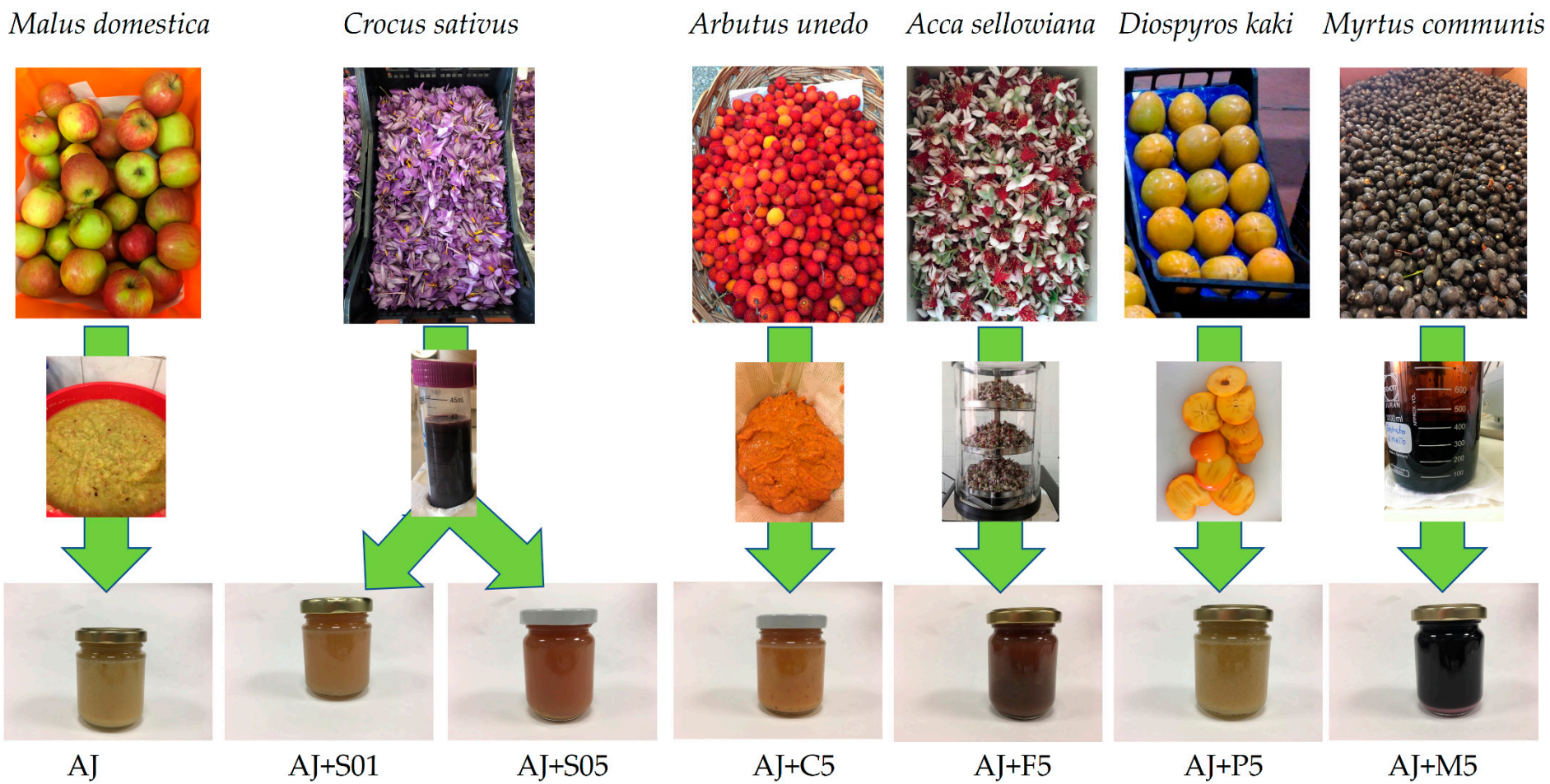

Figure S1. Plant material used for the investigation, semi-finished products and the obtained final smoothies.