

### Supplemental Data

Table S1. Unidentified discriminant metabolic features in human urine after cranberry juice or apple juice by negative ionization

Retention Tim (min)	Detected Mass [M-H] <sup>-</sup>	p[1] (contribution) <sup>a</sup>	p(corr)[1] (confidence) <sup>b</sup>	Cranberry juice vs. Apple juice <sup>c</sup>	Cranberry juice vs. baseline <sup>d</sup>
0.91	192.0586	0.070	0.732	----	↑
1.00	179.9963	0.183 (0.174)	0.931 (0.953)	↑	↑
2.13	205.0711	0.076(0.078)	0.665 (0.721)	↑	↑
2.97	190.9646	0.064 (0.068)	0.610 (0.722)	↑	↑
3.73	200.0921	0.080	0.691	↑	----
4.17	141.0545	0.073	0.677	↑	----
5.49	162.9879	0.156 (0.160)	0.835 (0.905)	↑	↑
5.59	163.9890	0.163 (0.156)	0.936 (0.973)	↑	↑
5.62	82.0283	0.171 (0.164)	0.924 (0.965)	↑	↑
5.62	291.9446	0.177 (0.176)	0.909 (0.956)	↑	↑
5.66	346.9621	0.199 (0.185)	0.926 (0.953)	↑	↑
5.67	163.9816	0.189 (0.191)	0.908 (0.960)	↑	↑
5.69	273.9641	0.160 (0.156)	0.935(0.973)	↑	↑
5.74	177.9806	0.181 (0.185)	0.891 (0.958)	↑	↑
5.74	161.9856	0.188 (0.207)	0.842 (0.941)	↑	↑
5.75	162.9882	0.163 (0.169)	0.905 (0.958)	↑	↑
5.86	77.9635	0.155 (0.162)	0.922(0.952)	↑	↑
5.90	346.9621	0.212 (0.200)	0.947 (0.970)	↑	↑
5.91	163.9889	0.162 (0.159)	0.930 (0.967)	↑	↑
5.91	163.9815	0.175 (0.190)	0.899 (0.965)	↑	↑
5.93	161.9856	0.176 (0.190)	0.833 (0.931)	↑	↑

Table S1. Continued.

Retention Tim (min)	Detected Mass [M-H] <sup>-</sup>	p[1] (contribution) <sup>a</sup>	p(corr)[1] (confidence) <sup>b</sup>	Cranberry juice vs. Apple juice <sup>c</sup>	Cranberry juice vs. Baseline <sup>d</sup>
5.95	77.9635	0.156(0.157)	0.917(0.946)	↑	↑
6.00	177.9808	0.161(0.147)	0.902(0.892)	↑	↑
6.01	291.9443	0.154 (0.148)	0.915 (0.919)	↑	↑
6.05	82.0283	0.145 (0.140)	0.926 (0.953)	↑	↑
6.47	344.0305	0.084 (0.075)	0.813 (0.862)	↑	↑
6.56	432.0720	0.106 (0.108)	0.874 (0.928)	↑	↑
6.63	360.0609	0.088 (0.087)	0.699 (0.726)	↑	↑
7.11	229.9741	0.099 (0.074)	0.700 (0.688)	↑	↑
7.27	220.0535	0.089	0.649	↑	---
7.45	185.0811	0.082 (0.057)	0.826 (0.829)	↑	↑
7.57	199.0605	0.076 (0.066)	0.908 (0.886)	↑	↑
7.63	229.1076	0.082 (0.071)	0.826(0.783)	↑	↑
8.03	204.9968	0.062	0.628	↑	---
8.04	204.0045	0.056 (0.053)	0.769 (0.821)	↑	↑
8.10	181.0698	0.064	0.738	---	↑
8.12	274.0755	0.066 (0.059)	0.797 (0.847)	↑	↑
8.23	443.0101	0.109 (0.126)	0.799 (0.909)	↑	↑
8.24	430.9833	0.099 (0.126)	0.781 (0.884)	↑	↑
8.26	432.9802	0.101 (0.132)	0.750 (0.891)	↑	↑
8.27	441.0156	0.111 (0.117)	0.833 (0.914)	↑	↑
8.29	434.9778	0.155 (0.135)	0.796 (0.912)	↑	↑

<sup>a</sup> The p[1] values of OPLS-DA model comparing cranberry juice with baseline are in inside the parentheses.

<sup>b</sup> The p (corr) [1] values of OPLS-DA model comparing cranberry juice with baseline are in inside the parentheses.

<sup>c</sup> Arrows indicated an increase or decrease of metabolite level in human urine after drinking cranberry juice versus apple juice.

<sup>d</sup> Arrows indicated an increase or decrease of metabolite level in human urine after drinking cranberry juice versus baseline.

Table S2. Unidentified discriminant metabolic features in human urine after cranberry juice or apple juice by positive ionization

Retention Tim (min)	Detected Mass [M+H] <sup>+</sup>	p[1] (contribution) <sup>a</sup>	p(corr)[1] (confidence) <sup>b</sup>	Cranberry juice vs. Apple juice <sup>c</sup>	Cranberry juice vs. Baseline <sup>d</sup>
0.870	197.10	-0.071	-0.738	↓	----
1.087	179.09	-0.093	-0.761	↓	----
1.970	196.03	0.067 (0.072)	0.736 (0.816)	↑	↑
2.039	143.07	0.057 (0.063)	0.744 (0.763)	↑	↑
2.157	264.09	0.086 (0.080)	0.763 (0.750)	↑	↑
2.920	125.06	0.055	0.826	----	↑
3.143	129.54	0.073 (0.061)	0.744 (0.645)	↑	↑
3.412	120.53	0.105 (0.108)	0.845 (0.836)	↑	↑
3.426	143.07	0.064 (0.077)	0.816 (0.801)	↑	↑
3.528	202.11	0.061	0.690	↑	----
4.009	129.54	0.074 (0.069)	0.800 (0.812)	↑	↑
4.119	285.08	0.103 (0.103)	0.714 (0.632)	↑	↑
4.152	127.08	0.059 (0.051)	0.692 (0.602)	↑	↑
5.264	149.01	0.131 (0.133)	0.897 (0.927)	↑	↑
5.367	237.97	0.197 (0.201)	0.922 (0.943)	↑	----
5.418	255.98	0.182 (0.188)	0.925 (0.944)	↑	↑
5.466	253.94	0.158 (0.159)	0.929 (0.923)	↑	↑
5.466	265.96	0.167 (0.181)	0.909 (0.937)	↑	↑
5.487	276.96	0.175 (0.172)	0.935 (0.926)	↑	↑
5.689	140.00	0.167 (0.176)	0.917 (0.930)	↑	↑
5.723	151.51	0.202 (0.213)	0.900 (0.914)	↑	↑
5.736	260.99	0.161 (0.161)	0.905 (0.922)	↑	↑

Table S2. Continued.

Retention Tim (min)	Detected Mass [M+H] <sup>+</sup>	p[1] (contribution) <sup>a</sup>	p(corr)[1] (confidence) <sup>b</sup>	Cranberry juice vs. Apple Juice <sup>c</sup>	Cranberry juice vs. Baseline <sup>d</sup>
5.86	130.9966	0.121 (0.120)	0.926 (0.921)	↑	↑
5.88	142.5044	0.132 (0.146)	0.910 (0.924)	↑	↑
5.90	229.0314	0.105 (0.103)	0.933 (0.954)	↑	↑
5.95	152.5208	0.111 (0.109)	0.917 (0.920)	↑	↑
6.03	207.0620	0.124 (0.112)	0.904 (0.950)	↑	↑
6.08	141.5363	0.116 (0.109)	0.921 (0.945)	↑	↑
6.22	164.0288	0.089 (0.089)	0.902 (0.942)	↑	↑
6.57	116.5105	0.071 (0.091)	0.522 (0.581)	↑	↑
6.75	247.0131	0.072 (0.080)	0.618 (0.653)	↑	↑
6.90	133.5387	0.121 (0.114)	0.942 (0.952)	↑	↑
6.91	201.0752	0.051	0.838	↑	----
7.04	311.0009	0.076 (0.058)	0.722 (0.598)	↑	↑
7.07	288.1806	0.062	0.675	↑	----
7.14	149.5338	0.055	0.826	↑	----
7.25	129.0184	0.065	0.716	↑	----
7.26	155.5507	0.051	0.740	----	↑
7.30	159.5291	0.070	0.741	↑	----
7.32	243.0476	0.092 (0.067)	0.728 (0.601)	↑	↑
7.35	187.0966	0.058	0.832	↑	----
7.36	150.5233	0.060	0.698	↑	----
7.41	143.5701	0.063	0.605	↑	----
7.46	142.5424	0.064 (0.053)	0.861 (0.806)	↑	↑
7.68	213.1122	0.062	0.792	↑	----
7.72	204.0420	0.059	0.756	↑	----

Table S2. Continued.

Retention Tim (min)	Detected Mass [M+H] <sup>+</sup>	p[1] (contribution) <sup>a</sup>	p(corr)[1] (confidence) <sup>b</sup>	Cranberry juice vs. Apple juice <sup>c</sup>	Cranberry juice vs. Baseline <sup>d</sup>
7.78	183.5290	0.074 (0.070)	0.767 (0.798)	↑	↑
7.89	203.544	0.068 (0.073)	0.788 (0.824)	↑	↑
8.03	404.5529	0.066 (0.077)	0.755 (0.831)	↑	↑
8.03	591.0945	0.071 (0.068)	0.689 (0.790)	↑	↑
8.04	576.1292	0.056 (0.069)	0.690 (0.797)	↑	↑
8.04	413.0433	0.063 (0.057)	0.672 (0.776)	↑	↑
8.04	421.0505	0.051	0.636	----	↑
8.04	180.0144	0.050 (0.060)	0.663 (0.796)	↑	↑
8.05	415.0440	0.071	0.782	----	↑
8.05	181.2448	0.056 (0.060)	0.584 (0.583)	↑	↑
8.05	178.8979	0.065 (0.057)	0.561 (0.559)	↑	↑
8.06	204.1052	0.084 (0.108)	0.748 (0.810)	↑	↑
8.06	236.1807	-0.059	-0.545	↓	----
8.08	243.5619	-0.062	-0.699	↓	----
8.09	364.0349	-0.075	-0.762	↓	----
8.09	181.5549	-0.050	-0.755	↓	----
8.10	172.5497	-0.050	-0.774	↓	----
8.10	180.5359	-0.069	-0.753	↓	----
8.10	193.5648	-0.056	-0.692	↓	----
8.11	193.0628	-0.053	-0.737	↓	----
8.14	201.0492	-0.051	-0.728	↓	----
8.27	238.5014	0.126 (0.146)	0.913 (0.949)	↑	↑
8.41	153.5600	0.052	0.649	↑	----

Table S2. Continued.

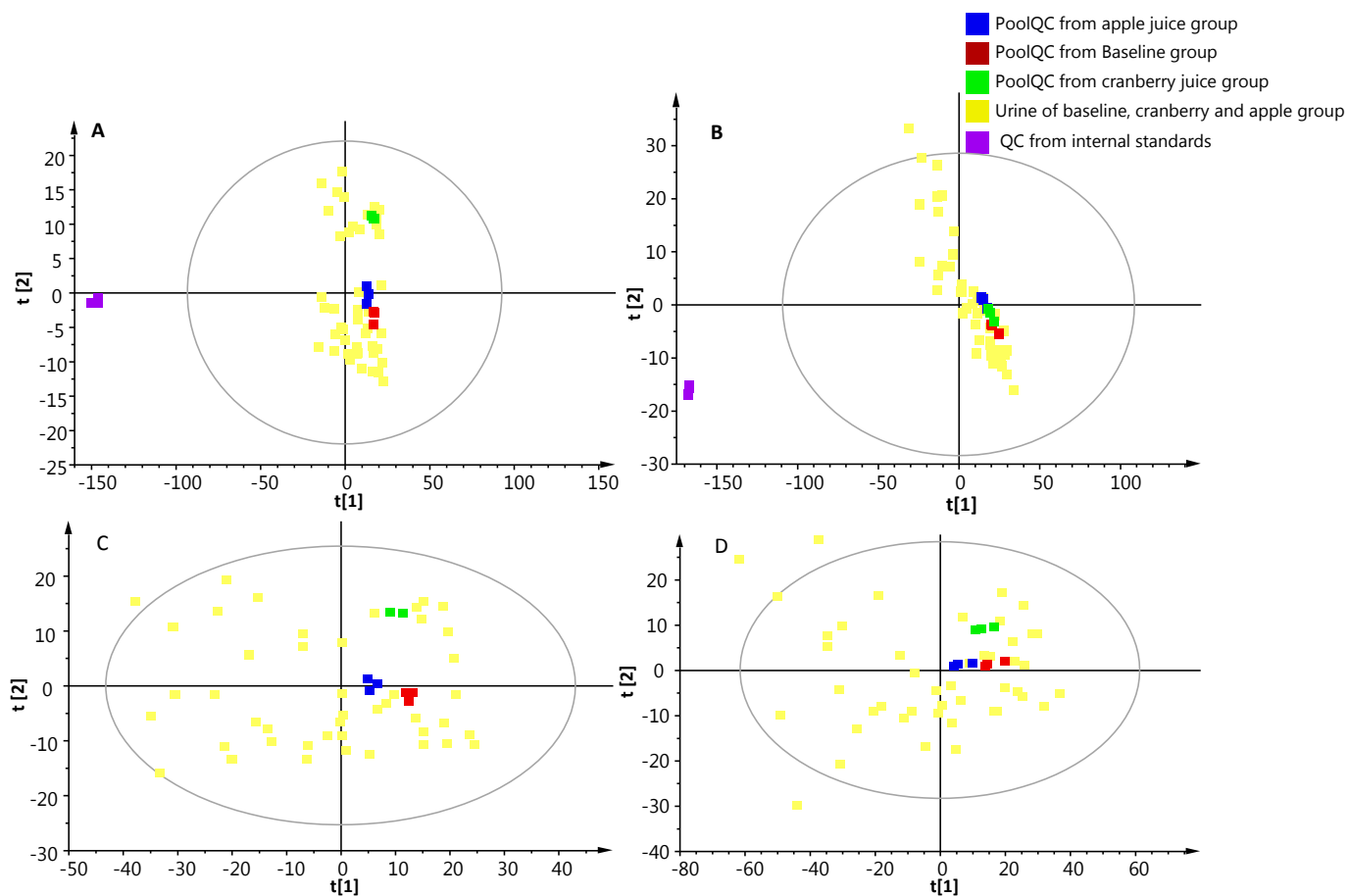
Retention Tim (min)	Detected Mass [M+H] <sup>+</sup>	p[1] (contribution) <sup>a</sup>	p(corr)[1] (confidence) <sup>b</sup>	Cranberry juice vs. Apple juice <sup>c</sup>	Cranberry juice vs. Baseline <sup>d</sup>
8.47	83.0863	0.050 (0.050)	0.691 (0.768)	↑	↑
8.79	213.0655	0.051 (0.066)	0.620 (0.758)	↑	↑

<sup>a</sup> The p[1] values of OPLS-DA model comparing cranberry juice with baseline are in inside the parentheses.

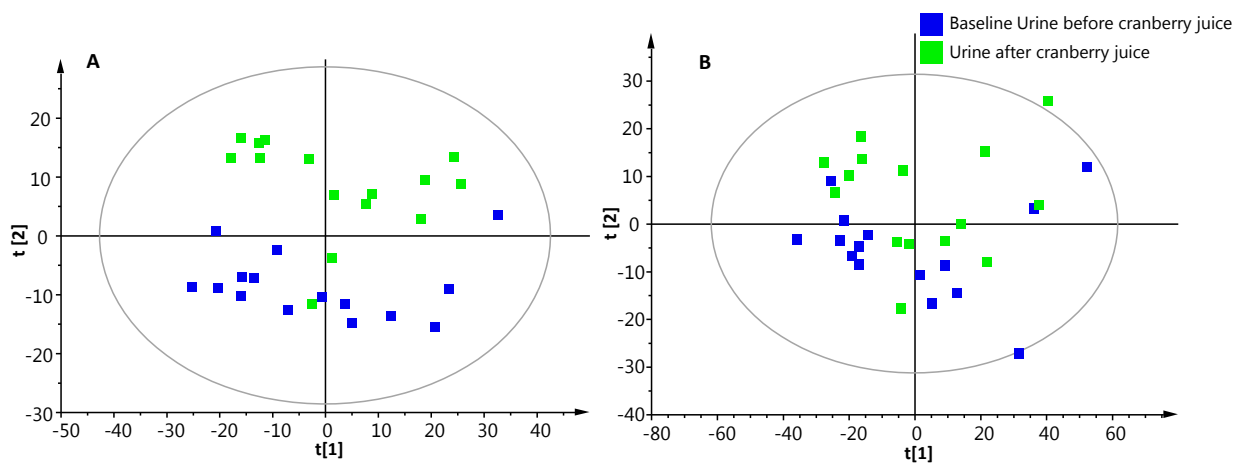
<sup>b</sup> The p (corr) [1] values of OPLS-DA model comparing cranberry juice with baseline are in inside the parentheses.

<sup>c</sup> Arrows indicated an increase or decrease of metabolite level in human urine after drinking cranberry juice versus apple juice.

<sup>d</sup> Arrows indicated an increase or decrease of metabolite level in human urine after drinking cranberry juice versus baseline.

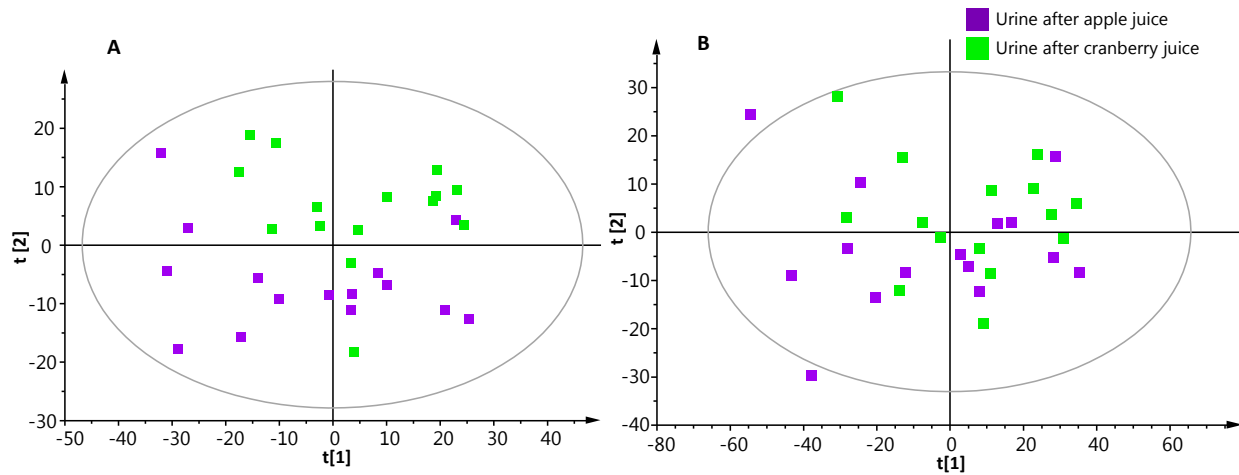


**Figure S1.** The PCA score plots of urine and quality control samples. Data in panel A and C were acquired by negative ionization. Data in panel B and D were acquired by positive ionization. Blue squares: pooled QC from apple juice group. Red squares: pooled QC from baseline group. Green squares: pooled QC from cranberry juice group. Yellow squares represent urine samples of baseline, apple juice and cranberry juice group. Purple squares represent neat QC created from pure internal standards.



**Figure S2.** The PCA score plot of human baseline urine and human urine after cranberry juice. Data in panel A were acquired by negative ionization. Data in panel B were acquired by positive ionization. Blue squares: baseline urine before drinking cranberry juice. Green squares: urine after drinking cranberry juice.





**Figure S3.** The PCA score plot of human urine after drinking apple juice or cranberry juice. Data in panel A were acquired by negative ionization. Data in panel B were acquired by positive ionization. Purple squares: urine after drinking apple juice. Green squares: urine after drinking cranberry juice.