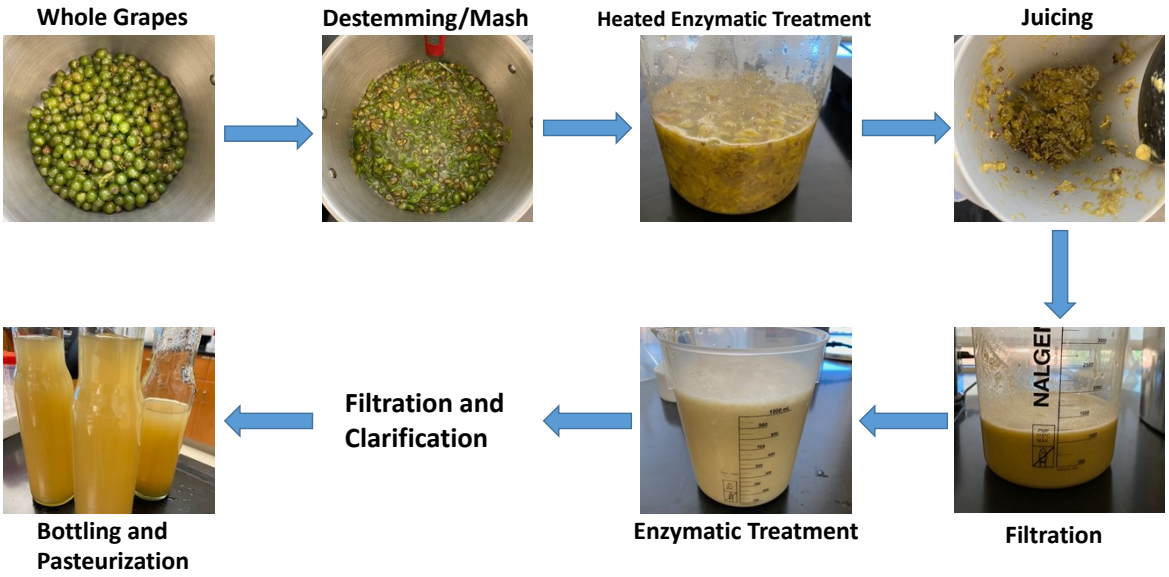
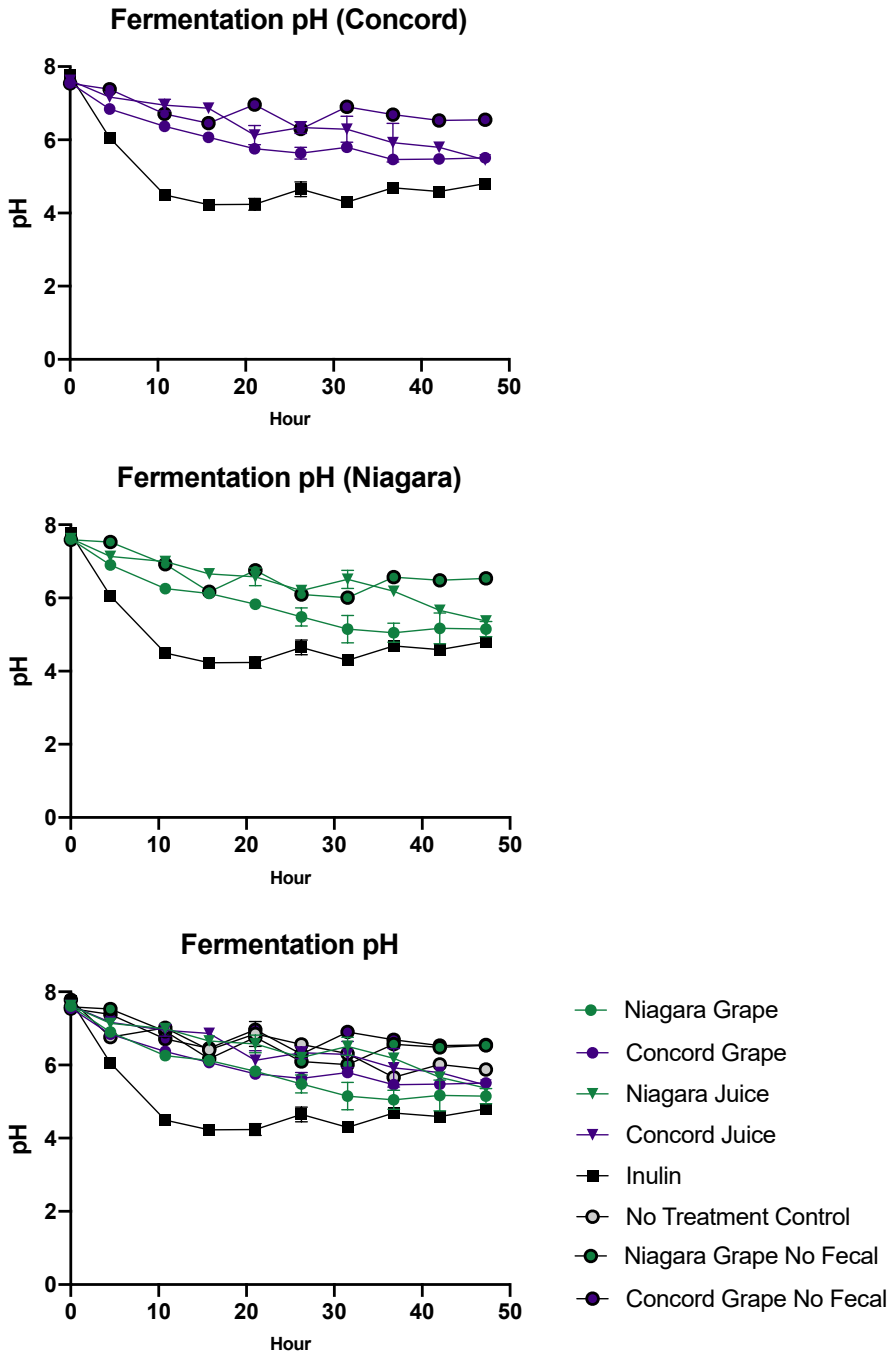


Supplemental Figure 1. Bench-top emulation of commercial 100% grape juice processing.



Supplemental Figure 2. pH (mean ± SD) of anaerobic microbial fermentation of Concord and Niagara grapes, 100% grape juices, and relevant controls over 48 hours.

Supplemental Table 1. SIR and MRM transitions for identification and quantification of phenolic compounds and metabolites.

Compound	MW (g/mol)	Detection Mode	$[M-H]^-$ (m/z)	$[M+H]^+$ (m/z)	Fragment Ion (m/z)	Cone Voltage (V)	Collision Energy (eV)
(+)-catechin	290	(-) ESI	289	n/a	109	33	24
(-)-epicatechin	290	(-) ESI	289	n/a	109	33	24
(+)-gallocatechin	306	(-) ESI	305	n/a	125	40	20
(-)-epigallocatechin	306	(-) ESI	305	n/a	125	40	20
(-)-epicatechin gallate	442	(-) ESI	441	n/a	169	36	18
procyanidin B2	579	(-) ESI	578	n/a	289	25	25
vanillic acid	168	(-) ESI	167	n/a	152	27	12
coutaric acid	296	(-) ESI	295	n/a	163	30	24
caftaric acid	312	(-) ESI	311	n/a	149	22	20
p-coumaric acid	164	(-) ESI	163	n/a	119	30	16
gallic acid	170	(-) ESI	169	n/a	125	34	16
caffeic acid	180	(-) ESI	179	n/a	135	32	22
ferulic acid	194	(-) ESI	193	n/a	134	28	17
phenylacetic acid	136	(-) ESI	135	n/a	91	18	6
3-hydroxyphenylacetic acid	152	(-) ESI	151	n/a	136	34	12
4-hydroxybenzoic acid	138	(-) ESI	137	n/a	93	28	12
3-hydroxybenzoic acid	138	(-) ESI	137	n/a	93	30	12
3,4-dihydroxybenzoic acid	154	(-) ESI	153	n/a	109	28	14
3-(3-hydroxyphenyl)propionic acid	166	(-) ESI	165	n/a	147	30	15
3-(3OH-4methoxy-phenyl)propionic acid	196	(-) ESI	195	n/a	136	32	12
3-(4-hydroxyphenyl)propionic acid	166	(-) ESI	165	n/a	121	30	12
4OH-3,5-dimethoxybenzaldehyde	182	(-) ESI	181	n/a	166	24	12
4-hydroxybenzaldehyde	122	(-) ESI	121	n/a	92	44	24
hippuric acid	179	(-) ESI	178	n/a	77	28	16
quercetin	302	(-) ESI	301	n/a	151	38	20
myricetin	318	(-) ESI	317	n/a	151	46	26
kaempferol-3-glucoside	448	(-) ESI	447	n/a	284	42	18
quercetin-3-glucoside	464	(-) ESI	463	n/a	300	42	24
myricetin-3-glucose	480	(-) ESI	479	n/a	317	42	20
kaempferol-3-rutinoside	595	(-) ESI	594	n/a	285	40	18
quercetin-3-rutinoside	610	(-) ESI	609	n/a	300	42	24
resveratrol	228	(-) ESI	227	n/a	185	38	16
resveratrol-3-glucoside	390	(-) ESI	389	n/a	227	38	20
cyanidin-3-arabinoside	419	(+) ESI	n/a	419	287	46	20
peonidin-3-arabinoside	433	(+) ESI	n/a	433	301	35	20
delphinidin-3-arabinoside	435	(+) ESI	n/a	435	303	46	18
petunidin-3-arabinoside	449	(+) ESI	n/a	449	317	40	22
cyanidin-3-glucoside	449	(+) ESI	n/a	449	287	46	20
peonidin-3-glucoside	463	(+) ESI	n/a	464	301	35	30
delphinidin-3-glucoside	465	(+) ESI	n/a	465	303	46	20
petunidin-3-glucoside	479	(+) ESI	n/a	479	317	40	22
malvidin-3-glucoside	493	(+) ESI	n/a	493	287	46	20
cyanidin-3-galactoside	449	(+) ESI	n/a	449	287	46	20
peonidin-3-galactoside	463	(+) ESI	n/a	464	301	35	30
malvidin-3-galactoside	493	(+) ESI	n/a	493	287	46	28
delphinidin-3-glucuronide	466	(+) ESI	n/a	465	303	46	18

3-(3,4diHP)- γ-valerolactone	208	(+) ESI	n/a	209	148	25	20
γ-valerolactone	100	(+) ESI	n/a	101	55	18	10
Cyanidin (acylated forms)	n/a	(+) ESI	n/a	287	n/a	25	n/a
Peonidin (acylated forms)	n/a	(+) ESI	n/a	301	n/a	25	n/a
Petunidin (acylated forms)	n/a	(+) ESI	n/a	317	n/a	25	
Delphinidin (acylated forms)	n/a	(+) ESI	n/a	303	n/a	25	n/a
Malvidin (acylated forms)	n/a	(+) ESI	n/a	331	n/a	25	n/a

*acylated forms of anthocyanins were determined through single ion responses (SIR) of the parent anthocyanin and were identified as acylated forms due to shifts in retention

Supplemental Table 2. Raw material content (mg/100g) of phenolic species in Concord and Niagara grape and 100% juice samples.

Compound (mg/100g)	Concord Juice	Concord Grape	Niagara Juice	Niagara Grape
catechin	0.27 ± 0.02	3.91 ± 0.27	6.25 ± 0.17	16.63 ± 1.18
epicatechin	0.45 ± 0.05	4.38 ± 0.31	10.99 ± 0.44	9.62 ± 0.33
gallocatechin	n/d	n/d	0.16 ± 0.01	n/d
epigallocatechin	n/d	0.14 ± 0.02	0.16 ± 0.02	0.20 ± 0.04
epicatechin gallate	0.02 ± 0.01	0.75 ± 0.11	0.96 ± 0.05	0.68 ± 0.18
procyanidin B2	0.26 ± 0.02	0.58 ± 0.09	1.04 ± 0.11	0.83 ± 0.18
Total Flavan-3-ols	1.00 ± 0.10	9.75 ± 0.82	19.56 ± 0.82	27.96 ± 1.91
vanillic acid	0.01 ± 0.01	n/d	0.02 ± 0.01	n/d
coutaric acid	0.32 ± 0.02	0.10 ± 0.01	1.09 ± 0.09	0.14 ± 0.02
caftaric acid	1.70 ± 0.06	0.67 ± 0.04	5.68 ± 0.29	0.64 ± 0.11
p-coumaric acid	0.07 ± 0.01	0.04 ± 0.01	0.09 ± 0.01	0.03 ± 0.01
gallic acid	0.09 ± 0.01	0.06 ± 0.01	1.40 ± 0.16	0.06 ± 0.01
caffeic acid	0.04 ± 0.01	0.04 ± 0.01	0.22 ± 0.01	0.04 ± 0.01
ferulic acid	0.03 ± 0.01	0.08 ± 0.01	0.02 ± 0.01	0.03 ± 0.01
Total Phenolic acids	2.28 ± 0.09	1.03 ± 0.06	8.54 ± 0.55	0.98 ± 0.14
resveratrol	0.01 ± 0.01	0.03 ± 0.01	0.01 ± 0.01	0.03 ± 0.01
resveratrol-3-glucoside	0.03 ± 0.01	0.04 ± 0.01	0.03 ± 0.01	0.04 ± 0.01
Total Stilbenes	0.04 ± 0.01	0.07 ± 0.01	0.05 ± 0.01	0.07 ± 0.01
quercetin	0.01 ± 0.01	0.01 ± 0.01	0.02 ± 0.01	0.01 ± 0.01
myricetin	n/d	0.02 ± 0.01	n/d	n/d
kaempferol-3-glucoside	n/d	n/d	0.07 ± 0.01	0.02 ± 0.01
quercetin-3-glucoside	0.66 ± 0.05	0.88 ± 0.02	0.85 ± 0.03	0.63 ± 0.10
myricetin-3-glucoside	0.29 ± 0.06	0.09 ± 0.01	n/d	n/d
kaempferol-3-rutinoside	2.79 ± 0.26	1.93 ± 0.59	n/d	n/d
quercetin-3-rutinoside	1.28 ± 0.14	4.56 ± 1.21	0.01 ± 0.01	0.09 ± 0.03
Total Flavonols	5.04 ± 0.51	7.50 ± 1.84	0.95 ± 0.04	0.75 ± 0.13
cyanidin-3-arabinoside	0.03 ± 0.01	0.12 ± 0.01	n/d	n/d
peonidin-3-arabinoside	0.10 ± 0.01	0.42 ± 0.06	n/d	n/d
delphinidin-3-arabinoside	0.03 ± 0.01	0.13 ± 0.01	n/d	n/d
petunidin-3-arabinoside	n/d	0.04 ± 0.01	n/d	n/d
cyanidin-3-glucoside	4.86 ± 0.08	16.21 ± 1.73	n/d	n/d
peonidin-3-glucoside	1.07 ± 0.05	3.80 ± 0.48	n/d	n/d
delphinidin-3-glucoside	0.16 ± 0.01	2.80 ± 0.32	n/d	n/d
petunidin-3-glucoside	0.52 ± 0.02	4.05 ± 0.34	n/d	n/d
malvidin-3-glucoside	0.03 ± 0.01	0.10 ± 0.01	n/d	n/d
cyanidin-3-galactoside	0.21 ± 0.02	0.15 ± 0.04	n/d	n/d
peonidin-3-galactoside	6.40 ± 0.09	4.07 ± 0.78	n/d	n/d
malvidin-3-galactoside	2.21 ± 0.05	1.88 ± 0.37	n/d	n/d
cyanidin (acylated)	1.85 ± 0.11	13.82 ± 1.03	n/d	n/d

peonidin (acylated)	6.80 ± 0.23	24.28 ± 2.64	n/d	n/d
delphinidin (acylated)	2.82 ± 0.13	99.72 ± 8.21	n/d	n/d
petunidin (acylated)	0.41 ± 0.02	4.47 ± 0.28	n/d	n/d
malvidin (acylated)	3.93 ± 0.18	20.43 ± 3.36	n/d	n/d
Total Anthocyanins (no acy)	15.61 ± 0.33	33.77 ± 4.16	n/d	n/d
Total Anthocyanins (Acy)	15.82 ± 0.66	162.72 ± 15.52	n/d	n/d
Total Anthocyanins (Total)	31.42 ± 0.99	196.49 ± 19.68	n/d	n/d

**n/d indicates that the species was not detected*
**Data are expressed as mean ± standard deviation from n=4 independent assessments.*

Supplemental Table 3. Absolute bioaccessible content (mg/100g) of phenolic species in Concord and Niagara grape and 100% juice samples.

Compound (mg/100g)	Concord Juice	Concord Grape	Niagara Juice	Niagara Grape
catechin	0.16 ± 0.01	0.01 ± 0.01	5.28 ± 0.20	0.03 ± 0.04
epicatechin	0.11 ± 0.01	n/d	4.11 ± 0.14	0.01 ± 0.01
gallocatechin	n/d	n/d	0.03 ± 0.01	n/d
epigallocatechin	n/d	n/d	0.04 ± 0.01	n/d
epicatechin gallate	n/d	n/d	0.03 ± 0.01	n/d
procyanidin B2	0.02 ± 0.01	n/d	0.18 ± 0.02	n/d
Total Flavan-3-ols	0.29 ± 0.03	0.01 ± 0.01	9.67 ± 0.37	0.03 ± 0.05
vanillic acid	0.02 ± 0.01	n/d	0.01 ± 0.01	n/d
caftaric acid	n/d	0.03 ± 0.01	0.01 ± 0.01	0.01 ± 0.01
p-coumaric acid	1.37 ± 0.07	0.12 ± 0.11	0.07 ± 0.01	n/d
gallic acid	0.03 ± 0.01	0.13 ± 0.02	0.03 ± 0.01	0.10 ± 0.03
caffeic acid	0.09 ± 0.01	0.19 ± 0.10	0.08 ± 0.01	0.01 ± 0.01
ferulic acid	0.02 ± 0.01	0.10 ± 0.02	0.01 ± 0.01	n/d
Total Phenolic Acids	1.54 ± 0.09	0.56 ± 0.26	0.23 ± 0.03	0.12 ± 0.05
resveratrol-3-glucoside	0.01 ± 0.01	n/d	0.01 ± 0.01	n/d
Total Stilbenes	0.01 ± 0.01	n/d	0.01 ± 0.01	n/d
kaempferol-3-glucoside	n/d	n/d	0.01 ± 0.01	0.04 ± 0.02
quercetin-3-glucoside	0.14 ± 0.01	0.10 ± 0.02	0.15 ± 0.01	0.10 ± 0.03
myricetin-3-glucoside	0.06 ± 0.01	0.02 ± 0.01	n/d	n/d
kaempferol-3-rutinoside	0.05 ± 0.03	n/d	n/d	n/d
Total Flavonols	0.25 ± 0.06	0.11 ± 0.03	0.17 ± 0.02	0.14 ± 0.05
cyanidin-3-arabinoside	0.01 ± 0.01	n/d	n/d	n/d
peonidin-3-arabinoside	0.04 ± 0.01	n/d	n/d	n/d
delphinidin-3-arabinoside	0.01 ± 0.01	0.03 ± 0.01	n/d	n/d
cyanidin-3-glucoside	2.74 ± 0.12	0.02 ± 0.01	n/d	n/d
peonidin-3-glucoside	0.67 ± 0.03	0.03 ± 0.01	n/d	n/d
delphinidin-3-glucoside	0.04 ± 0.01	n/d	n/d	n/d
petunidin-3-glucoside	0.19 ± 0.01	n/d	n/d	n/d
malvidin-3-glucoside	0.01 ± 0.01	n/d	n/d	n/d

cyanidin-3-galactoside	0.15 ± 0.01	0.01 ± 0.01	n/d	n/d
peonidin-3-galactoside	3.65 ± 0.26	4.08 ± 0.86	n/d	n/d
malvidin-3-galactoside	1.23 ± 0.06	2.32 ± 0.41	n/d	n/d
cyandin (acylated)	1.16 ± 0.03	0.03 ± 0.02	n/d	n/d
peonidin (acylated)	4.45 ± 0.19	1.36 ± 0.16	n/d	n/d
delphinidin (acylated)	0.42 ± 0.19	0.16 ± 0.06	n/d	n/d
petunidin (acylated)	0.15 ± 0.01	0.01 ± 0.01	n/d	n/d
malvidin (acylated)	2.80 ± 0.11	1.53 ± 0.20	n/d	n/d
Total Anthocyanins (no acy)	8.73 ± 0.50	6.50 ± 1.30	n/d	n/d
Total Anthocyanins (Acy)	8.98 ± 0.39	3.09 ± 0.43	n/d	n/d
Total Anthocyanins (Total)	17.71 ± 0.88	9.59 ± 1.73	n/d	n/d
3-hydroxyphenylpropionic acid	0.06 ± 0.01	0.04 ± 0.01	0.13 ± 0.02	0.05 ± 0.01
4-hydroxyphenylpropionic acid	0.03 ± 0.01	0.01 ± 0.01	0.05 ± 0.02	0.02 ± 0.01
phenylacetic acid	0.02 ± 0.01	0.01 ± 0.01	0.02 ± 0.01	0.01 ± 0.01

**n/d indicates that the species was not detected*

**Data are expressed as mean ± standard deviation from n=4 independent assessments.*

Supplemental Table 4. Aqueous Digesta treatment cellular transport (picomol/mL of basolateral media) of phenolic species in Concord and Niagara grape and 100% juice samples.

	Concord Juice					Concord Grape					Niagara Juice					Niagara Grape				
Compound (picomol/mL)	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes
phenylacetic acid	7 ± 8	30 ± 35	72 ± 20	99 ± 53	194 ± 44	16 ± 6	14 ± 9	26 ± 8	28 ± 11	43 ± 7	6 ± 8	145 ± 14	220 ± 12	264 ± 11	226 ± 7	3 ± 5	7 ± 9	15 ± 7	20 ± 16	34 ± 15
3-methoxyphenylacetic acid	97 ± 9	165 ± 31	225 ± 32	304 ± 28	359 ± 40	34 ± 16	92 ± 4	138 ± 4	176 ± 9	221 ± 18	243 ± 63	558 ± 118	805 ± 56	687 ± 43	731 ± 46	56 ± 8	97 ± 14	141 ± 25	180 ± 11	210 ± 25
3-hydroxyphenylacetic acid	19 ± 6	12 ± 4	12 ± 2	13 ± 6	12 ± 4	11 ± 4	9 ± 1	8 ± 1	9 ± 3	12 ± 5	12 ± 6	13 ± 3	11 ± 2	11 ± 1	11 ± 2	11 ± 7	8 ± 2	10 ± 4	10 ± 4	11 ± 4
Total phenylacetic acids	123 ± 16	207 ± 49	309 ± 34	416 ± 71	565 ± 60	61 ± 17	114 ± 11	172 ± 7	213 ± 7	276 ± 22	261 ± 64	716 ± 131	1036 ± 56	962 ± 45	969 ± 52	70 ± 13	112 ± 22	165 ± 35	210 ± 29	256 ± 42
4-methoxybenzoic acid	2 ± 11	4 ± 1	4 ± 2	6 ± 3	11 ± 4	5 ± 3	11 ± 3	9 ± 2	16 ± 6	15 ± 5	90 ± 59	116 ± 61	311 ± 69	459 ± 48	677 ± 38	3 ± 1	6 ± 3	9 ± 5	16 ± 11	17 ± 7
4-hydroxybenzoic acid	142 ± 37	399 ± 61	442 ± 77	458 ± 74	549 ± 81	145 ± 22	223 ± 48	253 ± 40	320 ± 49	345 ± 40	131 ± 44	201 ± 55	258 ± 33	330 ± 68	433 ± 130	99 ± 25	139 ± 62	189 ± 26	237 ± 41	287 ± 38
3-hydroxybenzoic acid	17 ± 10	36 ± 5	55 ± 8	68 ± 14	110 ± 16	17 ± 9	39 ± 10	59 ± 23	81 ± 27	87 ± 27	21 ± 11	48 ± 19	67 ± 22	115 ± 45	133 ± 58	28 ± 12	44 ± 12	69 ± 38	44 ± 25	26 ± 25
dihydroxybenzoic acid	245 ± 48	411 ± 81	804 ± 180	840 ± 167	972 ± 208	187 ± 35	396 ± 109	551 ± 121	515 ± 89	493 ± 72	597 ± 88	890 ± 82	917 ± 23	1069 ± 75	1435 ± 132	222 ± 85	486 ± 165	413 ± 116	553 ± 118	748 ± 144
gallic acid	101 ± 4	153 ± 11	207 ± 6	257 ± 12	306 ± 14	98 ± 5	145 ± 6	201 ± 5	252 ± 4	301 ± 4	117 ± 31	180 ± 41	227 ± 38	287 ± 38	346 ± 42	96 ± 11	146 ± 6	198 ± 15	250 ± 14	298 ± 14
Total benzoic acids	507 ± 44	1002 ± 93	1512 ± 205	1628 ± 171	1947 ± 247	453 ± 28	815 ± 155	1075 ± 149	1186 ± 92	1244 ± 87	956 ± 103	1436 ± 120	1781 ± 104	2262 ± 92	3025 ± 268	447 ± 72	822 ± 121	878 ± 101	1144 ± 161	1442 ± 172
4-hydroxyphenylpropionic acid	25 ± 11	48 ± 12	83 ± 8	112 ± 24	138 ± 16	15 ± 4	31 ± 8	53 ± 11	67 ± 15	82 ± 10	26 ± 6	55 ± 13	75 ± 8	92 ± 7	112 ± 4	16 ± 7	25 ± 8	42 ± 7	54 ± 9	65 ± 10
3-hydroxyphenylpropionic acid	77 ± 11	146 ± 14	238 ± 27	308 ± 43	360 ± 65	32 ± 6	60 ± 13	125 ± 26	186 ± 19	224 ± 35	122 ± 31	211 ± 69	262 ± 26	375 ± 67	500 ± 38	60 ± 7	88 ± 21	151 ± 13	138 ± 25	149 ± 19
Total Phenylpropionic acids	102 ± 20	193 ± 25	321 ± 33	420 ± 48	498 ± 62	48 ± 10	91 ± 10	178 ± 36	253 ± 30	306 ± 44	148 ± 33	267 ± 79	337 ± 33	468 ± 65	612 ± 39	76 ± 14	113 ± 28	193 ± 14	193 ± 30	214 ± 27
4-hydroxybenzaldehyde	34 ± 8	41 ± 9	43 ± 12	60 ± 5	59 ± 4	9 ± 3	19 ± 7	19 ± 5	22 ± 5	26 ± 4	12 ± 2	28 ± 9	26 ± 9	39 ± 11	41 ± 5	7 ± 1	10 ± 6	13 ± 4	29 ± 18	31 ± 12
3-hydroxy-4-methoxybenzaldehyde	1 ± 1	2 ± 1	2 ± 1	3 ± 1	4 ± 2	1 ± 1	4 ± 1	3 ± 2	6 ± 3	7 ± 2	5 ± 2	6 ± 1	7 ± 3	13 ± 6	19 ± 5	3 ± 2	3 ± 1	4 ± 3	7 ± 3	7 ± 2
Total benzaldehydes	35 ± 8	43 ± 9	45 ± 12	63 ± 5	63 ± 3	10 ± 2	23 ± 8	22 ± 6	28 ± 3	33 ± 4	17 ± 3	33 ± 9	33 ± 7	52 ± 11	59 ± 5	9 ± 3	13 ± 5	17 ± 4	36 ± 20	38 ± 13
quercetin-3-glucoside	29 ± 18	138 ± 25	204 ± 24	199 ± 14	219 ± 13	13 ± 10	22 ± 13	24 ± 7	30 ± 9	34 ± 9	3 ± 1	16 ± 4	20 ± 3	75 ± 34	151 ± 14	4 ± 2	6 ± 2	10 ± 3	12 ± 2	18 ± 4
cyanidin-3-glucoside	2 ± 1	4 ± 1	24 ± 4	115 ± 6	127 ± 7	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
peonidin-3-Glucoside	n/d	4 ± 2	6 ± 2	4 ± 1	4 ± 1	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin-3-glucoside	n/d	28 ± 11	83 ± 13	113 ± 3	208 ± 12	4 ± 1	6 ± 1	9 ± 1	11 ± 1	13 ± 1	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin-3-glucuronide	2 ± 1	4 ± 3	3 ± 2	6 ± 3	6 ± 2	6 ± 1	8 ± 1	11 ± 1	13 ± 1	15 ± 1	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
petunidin-3-Glucoside	2 ± 1	18 ± 5	53 ± 7	63 ± 6	61 ± 6	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
malvidin-3-glucoside	4 ± 1	34 ± 6	315 ± 42	413 ± 34	398 ± 29	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Total anthocyanins	10 ± 1	91 ± 17	483 ± 57	713 ± 38	804 ± 25	11 ± 1	14 ± 1	20 ± 2	24 ± 1	28 ± 1	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d

**n/d indicates that the species was not detected*

**Data are expressed as mean ± standard deviation from n=4 independent assessments.*

Supplemental Table 5. Content (picomol/mL of fermenta for a 42mL fermentation) of phenolic species over a 48-hour anaerobic microbial fermentation in Concord and Niagara grape and 100% juices and relevant no fecal and no treatment controls.

	Concord Juice					Concord Grape				
Compound (nanomol/mL)	0 Hour	6 Hour	12 hour	24 Hour	48 Hour	0 Hour	6 Hour	12 hour	24 Hour	48 Hour
catechin	1.29 ± 0.33	0.91 ± 0.26	0.78 ± 0.23	0.51 ± 0.07	0.46 ± 0.05	16.85 ± 4.23	22.94 ± 6.61	15.39 ± 2.33	13.88 ± 1.77	12.42 ± 1.14
epicatechin	0.91 ± 0.40	0.91 ± 0.26	0.52 ± 0.13	0.24 ± 0.05	0.21 ± 0.07	21.08 ± 6.63	32.20 ± 3.05	15.37 ± 2.47	12.24 ± 1.39	8.28 ± 1.79
epigallocatechin	n/d	n/d	0.24 ± 0.06	0.09 ± 0.01	0.16 ± 0.04	0.80 ± 0.20	2.29 ± 0.38	1.48 ± 0.18	1.53 ± 0.45	1.81 ± 0.23
epicatechin gallate	0.04 ± 0.04	0.11 ± 0.14	0.09 ± 0.04	0.11 ± 0.07	0.02 ± 0.01	2.11 ± 0.98	2.76 ± 0.48	2.57 ± 0.57	2.60 ± 0.10	1.52 ± 0.77
procyanidin B2	0.23 ± 0.09	0.12 ± 0.10	0.21 ± 0.16	n/d	n/d	5.34 ± 0.68	7.11 ± 2.30	2.78 ± 0.69	3.13 ± 0.22	1.99 ± 0.31
p-coumaric acid	4.02 ± 0.17	7.94 ± 0.41	0.27 ± 0.01	0.26 ± 0.01	0.24 ± 0,01	2.21 ± 0.25	5.61 ± 0.62	0.36 ± 0.01	0.29 ± 0.02	0.34 ± 0.02
gallic acid	2.36 ± 0.15	2.48 ± 0.22	0.27 ± 0.02	0.30 ± 0.04	0.27 ± 0.01	1.94 ± 0.03	2.46 ± 0.06	0.58 ± 0.04	0.46 ± 0.04	0.28 ± 0.02
caffeic acid	0.34 ± 0.03	0.60 ± 0.06	n/d	n/d	n/d	0.24 ± 0.02	0.86 ± 0.09	0.24 ± 0.01	0.23 ± 0.01	n/d
ferulic acid	0.41 ± 0.06	0.45 ± 0.06	n/d	n/d	n/d	0.60 ± 0.11	0.87 ± 0.11	n/d	0.23 ± 0.01	0.24 ± 0.01
resveratrol	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
resveratrol-3-glucoside	0.04 ± 0.01	0.02 ± 0.01	0.04 ± 0.02	0.01 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d
quercetin	0.67 ± 0.10	0.95 ± 0.09	1.30 ± 0.26	0.85 ± 0.15	0.02 ± 0.01	0.53 ± 0.17	1.05 ± 0.11	1.57 ± 0.21	0.83 ± 0.16	0.62 ± 0.03
myricetin	0.01 ± 0.01	0.05 ± 0.03	0.05 ± 0.03	0.05 ± 0.03	0.01 ± 0.01	0.01 ± 0.01	0.03 ± 0.01	0.05 ± 0.02	0.08 ± 0.01	n/d
quercetin-3-glucoside	0.58 ± 0.07	0.12 ± 0.02	0.01 ± 0.01	n/d	n/d	0.35 ± 0.09	0.07 ± 0.02	0.01 ± 0.01	n/d	n/d
myricetin-3-glucoside	0.25 ± 0.01	0.02 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	n/d	0.03 ± 0.01	0.02 ± 0.01	0.01 ± 0.01	0.02 ± 0.01	n/d
quercetin-3-rutinoside	0.09 ± 0.06	n/d	n/d	n/d	n/d	0.88 ± 0.40	0.10 ± 0.07	n/d	n/d	n/d
peonidin-3-arabinoside	0.06 ± 0.02	n/d	n/d	n/d	n/d	0.02 ± 0.01	n/d	n/d	n/d	n/d
delphinidin-3-arabinoside	0.01 ± 0.01	n/d	n/d	n/d	n/d	0.08 ± 0.01	0.07 ± 0.01	0.07 ± 0.01	n/d	n/d
petunidin-3-arabinoside	0.03 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	n/d	n/d	0.02 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	n/d	n/d
malvidin-3-arabinoside	n/d	0.03 ± 0.02	0.04 ± 0.01	n/d	n/d	0.01 ± 0.01	0.02 ± 0.01	0.04 ± 0.01	n/d	n/d
cyanidin-3-glucoside	1.77 ± 0.03	1.19 ± 0.21	0.05 ± 0.01	n/d	n/d	0.33 ± 0.13	0.39 ± 0.10	0.10 ± 0.01	0.01 ± 0.01	n/d
peonidin-3-glucoside	0.23 ± 0.01	0.12 ± 0.02	n/d	n/d	n/d	0.09 ± 0.06	0.02 ± 0.01	n/d	n/d	n/d
delphinidin-3-glucoside	0.05 ± 0.03	0.31 ± 0.19	0.11 ± 0.06	n/d	n/d	1.80 ± 0.14	1.47 ± 0.75	0.71 ± 0.29	n/d	n/d
petunidin-3-glucoside	0.18 ± 0.01	0.19 ± 0.02	0.02 ± 0.01	n/d	n/d	0.26 ± 0.07	0.36 ± 0.13	0.18 ± 0.11	n/d	n/d
cyanidin-3-galactoside	0.31 ± 0.02	0.47 ± 0.06	0.04 ± 0.01	n/d	n/d	0.03 ± 0.01	0.01 ± 0.01	n/d	n/d	n/d
peonidin-3-galactoside	n/d	0.01 ± 0.01	n/d	n/d	n/d	n/d	1.08 ± 0.31	0.25 ± 0.10	n/d	n/d
delphinidin-3-galactoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
cyanidin (acylated)	0.95 ± 0.52	0.27 ± 0.13	n/d	n/d	n/d	0.61 ± 0.25	0.03 ± 0.01	0.05 ± 0.02	n/d	n/d
peonidin (acylated)	5.77 ± 0.25	1.29 ± 0.63	0.16 ± 0.04	n/d	n/d	1.59 ± 0.46	0.28 ± 0.03	0.14 ± 0.07	n/d	n/d
delphinidin (acylated)	1.19 ± 0.78	0.36 ± 0.23	0.12 ± 0.12	n/d	n/d	3.22 ± 0.86	0.77 ± 0.23	0.19 ± 0.03	n/d	n/d
petunidin (acylated)	0.43 ± 0.15	0.19 ± 0.02	0.14 ± 0.01	n/d	n/d	0.09 ± 0.05	0.18 ± 0.02	0.13 ± 0.01	n/d	n/d
malvidin (acylated)	3.85 ± 0.07	1.46 ± 0.08	n/d	n/d	n/d	1.73 ± 0.13	0.51 ± 0.23	0.07 ± 0.03	n/d	n/d
phenylacetic acid	n/d	4.71 ± 1.46	10.80 ± 2.70	17.50 ± 6.85	12.00 ± 2.85	n/d	5.60 ± 1.18	4.48 ± 0.78	7.48 ± 1.25	8.29 ± 2.49
3-hydroxyphenyl acetic acid	19.69 ± 2.01	40.04 ± 2.61	38.98 ± 6.45	33.95 ± 5.04	11.02 ± 2.84	14.86 ± 3.20	39.71 ± 4.06	36.32 ± 1.36	22.14 ± 4.36	15.01 ± 1.58
4-hydroxybenzoic acid	0.07 ± 0.04	2.59 ± 0.14	2.03 ± 0.16	0.34 ± 0.07	0.20 ± 0.05	0.06 ± 0.01	2.76 ± 0.35	1.35 ± 0.11	0.25 ± 0.02	0.16 ± 0.03
3-hydroxybenzoic acid	n/d	1.04 ± 0.08	1.41 ± 0.15	3.25 ± 0.18	1.98 ± 0.05	n/d	1.01 ± 0.07	1.34 ± 0.15	3.69 ± 0.24	2.54 ± 0.1
3,4-dihydroxybenzoic acid	n/d	0.09 ± 0.02	0.15 ± 0.05	0.29 ± 0.02	0.05 ± 0.03	n/d	0.09 ± 0.01	0.08 ± 0.03	0.10 ± 0.01	n/d
dihydroxybenzoic acid isomer	0.04 ± 0.01	0.05 ± 0.01	0.04 ± 0.01	0.03 ± 0.01	0.56 ± 0.04	0.04 ± 0.01	0.05 ± 0.01	0.04 ± 0.01	0.03 ± 0.01	0.46 ± 0.04
3,4diHP- γ-valerolactone	n/d	0.03 ± 0.01	0.07 ± 0.01	0.07 ± 0.01	0.05 ± 0.01	n/d	0.05 ± 0.01	0.31 ± 0.11	0.15 ± 0.03	0.17 ± 0.02
3-hydroxyphenylpropionic acid	n/d	n/d	0.31 ± 0.69	3.72 ± 1.94	6.22 ± 2.89	n/d	n/d	3.68 ± 2.27	15.66 ± 1.32	20.19 ± 2.27
3OH-4MEOHphenylpropionic acid	0.03 ± 0.01	0.09 ± 0.01	0.07 ± 0.02	0.01 ± 0.01	n/d	0.04 ± 0.01	0.21 ± 0.05	0.17 ± 0.04	n/d	n/d
4OH-3,5diMEOHbenzaldehyde	n/d	0.03 ± 0.01	0.02 ± 0.01	0.04 ± 0.02	n/d	n/d	0.03 ± 0.01	0.02 ± 0.01	n/d	n/d
4-hydroxyphenylpropionic acid	n/d	n/d	n/d	0.24 ± 0.04	0.03 ± 0.01	n/d	0.08 ± 0.03	0.08 ± 0.02	0.05 ± 0.01	0.03 ± 0.01
hippuric acid	0.34 ± 0.07	0.89 ± 0.17	0.88 ± 0.25	0.20 ± 0.04	n/d	0.11 ± 0.04	0.58 ± 0.20	0.43 ± 0.07	0.05 ± 0.06	n/d
4-hydroxybenzaldehyde	0.61 ± 0.07	0.58 ± 0.03	0.09 ± 0.03	0.06 ± 0.01	0.05 ± 0.02	0.44 ± 0.05	1.01 ± 0.26	0.21 ± 0.06	0.06 ± 0.01	0.06 ± 0.02
γ-valerolactone	n/d	n/d	n/d	0.15 ± 0.05	0.42 ± 0.03	n/d	n/d	n/d	0.31 ± 0.13	1.02 ± 0.20

	Concord Grape Fecal Free Control					Niagara Juice				
Compound (nanomol/mL)	0 Hour	6 Hour	12 hour	24 Hour	48 Hour	0 Hour	6 Hour	12 hour	24 Hour	48 Hour
catechin	18.34 ± 6.51	14.83 ± 0.59	22.39 ± 0.91	11.84 ± 1.95	10.25 ± 1.1	20.41 ± 2.75	17.06 ± 2.32	3.14 ± 0.62	1.62 ± 0.24	1.72 ± 9.66
epicatechin	13.57 ± 6.75	15.62 ± 2.81	21.57 ± 2.15	7.40 ± 1.80	4.33 ± 0.39	16.87 ± 1.00	12.79 ± 1.75	5.34 ± 0.53	0.62 ± 0.08	0.64 ± 0.19
epigallocatechin	0.51 ± 0.19	0.50 ± 0.04	1.00 ± 0.31	0.99 ± 0.27	2.20 ± 0.24	0.10 ± 0.05	0.11 ± 0.03	0.13 ± 0.07	0.13 ± 0.07	0.17 ± 0.09
epicatechin gallate	2.18 ± 0.18	2.45 ± 1.36	3.15 ± 0.13	1.78 ± 0.08	2.60 ± 0.31	1.09 ± 0.44	1.43 ± 0.14	2.97 ± 0.38	0.70 ± 0.19	0.08 ± 0.02
procyanidin B2	14.35 ± 0.77	5.87 ± 0.46	6.98 ± 0.34	6.59 ± 0.31	9.32 ± 1.09	1.25 ± 0.11	0.85 ± 0.21	0.34 ± 0.10	0.12 ± 0.04	0.03 ± 0.01
p-coumaric acid	0.28 ± 0.01	0.39 ± 0.04	0.40 ± 0.04	0.34 ± 0.02	0.38 ± 0.02	0.41 ± 0.06	0.80 ± 0.12	0.26 ± 0.01	0.24 ± 0.01	0.26 ± 0.01
gallic acid	1.20 ± 0.04	1.06 ± 0.04	0.46 ± 0.21	0.29 ± 0.01	0.26 ± 0.01	0.89 ± 0.09	1.24 ± 0.06	0.40 ± 0.02	0.34 ± 0.02	0.25 ± 0.01
caffeic acid	n/d	0.24 ± 0.01	0.26 ± 0.01	0.26 ± 0.01	0.24 ± 0.01	0.36 ± 0.06	1.47 ± 0.07	0.32 ± 0.03	0.26 ± 0.04	n/d
ferulic acid	0.51 ± 0.08	0.41 ± 0.01	0.52 ± 0.07	n/d	n/d	0.37 ± 0.04	0.47 ± 0.06	n/d	0.21 ± 0.01	0.21 ± 0.01
resveratrol	n/d	n/d	n/d	n/d	n/d	0.04 ± 0.02	0.02 ± 0.02	n/d	n/d	n/d
resveratrol-3-glucoside	n/d	n/d	n/d	n/d	n/d	0.05 ± 0.01	0.03 ± 0.01	0.02 ± 0.01	0.03 ± 0.02	n/d
quercetin	0.70 ± 0.03	0.06 ± 0.03	0.43 ± 0.04	0.92 ± 0.03	0.62 ± 0.01	1.07 ± 0.20	2.40 ± 0.35	3.27 ± 0.31	2.19 ± 0.23	0.02 ± 0.01
myricetin	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
quercetin-3-glucoside	0.63 ± 0.21	0.59 ± 0.18	0.55 ± 0.04	0.56 ± 0.07	0.80 ± 0.03	0.48 ± 0.05	0.14 ± 0.04	0.02 ± 0.01	n/d	n/d
myricetin-3-glucoside	0.03 ± 0.01	0.05 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
quercetin-3-rutinoside	0.79 ± 0.46	0.78 ± 0.20	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
peonidin-3-arabinoside	0.03 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin-3-arabinoside	0.05 ± 0.01	n/d	0.01 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d
petunidin-3-arabinoside	0.03 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d
malvidin-3-arabinoside	n/d	0.03 ± 0.01	0.04 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d
cyanidin-3-glucoside	0.34 ± 0.03	0.58 ± 0.01	0.35 ± 0.07	0.21 ± 0.02	0.19 ± 0.02	n/d	n/d	n/d	n/d	n/d
peonidin-3-glucoside	0.08 ± 0.01	0.04 ± 0.01	0.08 ± 0.06	0.10 ± 0.11	0.03 ± 0.01	n/d	n/d	n/d	n/d	n/d
delphinidin-3-glucoside	1.79 ± 0.33	1.15 ± 0.14	0.73 ± 0.15	0.24 ± 0.26	0.05 ± 0.01	n/d	n/d	n/d	n/d	n/d
petunidin-3-glucoside	0.17 ± 0.03	0.19 ± 0.05	0.31 ± 0.08	0.16 ± 0.06	0.12 ± 0.01	n/d	n/d	n/d	n/d	n/d
cyanidin-3-galactoside	0.03 ± 0.01	0.03 ± 0.01	0.09 ± 0.01	0.09 ± 0.01	0.08 ± 0.01	n/d	n/d	n/d	n/d	n/d
peonidin-3-galactoside	n/d	0.18 ± 0.10	0.13 ± 0.04	0.09 ± 0.06	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin-3-galactoside	n/d	0.32 ± 0.03	0.93 ± 0.13	0.63 ± 0.69	0.13 ± 0.01	n/d	n/d	n/d	n/d	n/d
cyanidin (acylated)	1.00 ± 0.72	0.45 ± 0.12	0.26 ± 0.07	0.13 ± 0.02	0.12 ± 0.01	n/d	n/d	n/d	n/d	n/d
peonidin (acylated)	3.43 ± 1.33	1.69 ± 0.24	1.56 ± 0.56	0.24 ± 0.26	0.06 ± 0.01	n/d	n/d	n/d	n/d	n/d
delphinidin (acylated)	5.19 ± 2.86	2.90 ± 0.54	2.76 ± 0.66	0.98 ± 1.05	0.21 ± 0.02	n/d	n/d	n/d	n/d	n/d
petunidin (acylated)	0.42 ± 0.08	0.15 ± 0.01	0.22 ± 0.02	0.17 ± 0.03	0.13 ± 0.01	n/d	n/d	n/d	n/d	n/d
malvidin (acylated)	3.46 ± 1.26	1.79 ± 0.37	1.74 ± 0.52	0.25 ± 0.20	0.11 ± 0.01	n/d	n/d	n/d	n/d	n/d
phenylacetic acid	n/d	n/d	n/d	n/d	n/d	n/d	8.74 ± 1.35	12.88 ± 1.19	18.82 ± 4.54	19.95 ± 7.21
3-hydroxyphenyl acetic acid	19.52 ± 6.79	11.14 ± 1.06	12.30 ± 0.94	10.47 ± 0.60	8.67 ± 0.75	18.85 ± 3.45	44.61 ± 3.96	42.54 ± 1.77	34.41 ± 2.77	22.91 ± 3.56
4-hydroxybenzoic acid	0.12 ± 0.03	n/d	n/d	n/d	n/d	0.05 ± 0.03	3.64 ± 0.67	3.00 ± 0.30	0.53 ± 0.07	0.12 ± 0.02
3-hydroxybenzoic acid	n/d	n/d	n/d	n/d	n/d	n/d	1.12 ± 0.22	1.38 ± 0.09	3.32 ± 0.16	1.90 ± 0.42
3,4-dihydroxybenzoic acid	n/d	n/d	n/d	n/d	n/d	n/d	0.13 ± 0.03	0.11 ± 0.01	0.04 ± 0.01	n/d
dihydroxybenzoic acid isomer	0.05 ± 0.01	0.04 ± 0.01	0.03 ± 0.01	0.52 ± 0.06	0.44 ± 0.05	0.05 ± 0.01	0.04 ± 0.01	0.03 ± 0.02	0.03 ± 0.01	0.52 ± 0.02
3,4diHP- γ-valerolactone	n/d	n/d	n/d	n/d	n/d	n/d	0.05 ± 0.01	0.09 ± 0.01	0.07 ± 0.01	0.05 ± 0.01
3-hydroxyphenylpropionic acid	n/d	n/d	n/d	0.31 ± 0.15	3.62 ± 2.94	n/d	n/d	0.59 ± 0.43	1.92 ± 1.03	7.06 ± 1.09
3OH-4MEOHphenylpropionic acid	0.08 ± 0.06	0.02 ± 0.01	n/d	n/d	n/d	0.02 ± 0.01	0.13 ± 0.03	0.08 ± 0.01	n/d	n/d
4OH-3,5diMEOHbenzaldehyde	n/d	n/d	n/d	n/d	n/d	n/d	n/d	0.02 ± 0.01	n/d	n/d
4-hydroxyphenylpropionic acid	n/d	n/d	n/d	n/d	n/d	n/d	0.03 ± 0.01	0.11 ± 0.02	0.42 ± 0.06	n/d
hippuric acid	0.62 ± 0.16	0.15 ± 0.05	0.77 ± 0.18	0.13 ± 0.03	n/d	0.33 ± 0.17	0.92 ± 0.21	0.93 ± 0.16	0.30 ± 0.21	n/d
4-hydroxybenzaldehyde	n/d	0.30 ± 0.04	0.57 ± 0.16	0.14 ± 0.03	0.03 ± 0.01	0.46 ± 0.07	0.70 ± 0.12	0.11 ± 0.02	0.04 ± 0.01	0.03 ± 0.01
γ-valerolactone	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	0.09 ± 0.02	0.27 ± 0.07

	Niagara Grape					Niagara Grape Fecal Free Control					Treatment Free Control				
Compound (nanomol/mL)	0 Hour	6 Hour	12 hour	24 Hour	48 Hour	0 Hour	6 Hour	12 hour	24 Hour	48 Hour	0 Hour	6 Hour	12 hour	24 Hour	48 Hour
catechin	15.13 ± 2.73	15.78 ± 4.33	20.49 ± 1.45	8.60 ± 1.60	11.12 ± 2.35	13.91 ± 4.46	16.42 ± 5.66	16.87 ± 2.39	9.93 ± 0.77	9.33 ± 3.07	n/d	n/d	n/d	n/d	n/d
epicatechin	5.64 ± 0.64	10.54 ± 1.98	6.09 ± 1.11	3.44 ± 0.66	7.90 ± 0.63	7.29 ± 1.24	10.77 ± 1.61	15.08 ± 1.16	5.46 ± 0.25	4.83 ± 1.11	n/d	n/d	n/d	n/d	n/d
epigallocatechin	0.11 ± 0.03	2.18 ± 0.28	3.16 ± 0.15	3.35 ± 0.45	4.54 ± 0.40	0.12 ± 0.04	0.13 ± 0.06	1.10 ± 0.75	0.25 ± 0.07	0.56 ± 0.04	n/d	n/d	n/d	n/d	n/d
epicatechin gallate	2.11 ± 0.33	1.90 ± 0.23	2.67 ± 0.34	2.08 ± 0.23	1.33 ± 0.18	1.86 ± 0.83	0.29 ± 0.11	0.49 ± 0.05	0.75 ± 0.31	1.46 ± 0.26	n/d	n/d	n/d	n/d	n/d
procyanidin B2	14.47 ± 1.53	5.70 ± 0.08	4.32 ± 0.36	1.57 ± 0.11	1.98 ± 0.21	6.61 ± 1.79	3.14 ± 0.18	4.44 ± 0.36	3.03 ± 0.50	4.79 ± 2.10	n/d	n/d	n/d	n/d	n/d
p-coumaric acid	0.27 ± 0.01	0.50 ± 0.06	0.24 ± 0.01	0.24 ± 0.01	0.25 ± 0.01	0.79 ± 0.08	0.31 ± 0.02	0.40 ± 0.02	0.28 ± 0.01	0.28 ± 0.01	n/d	n/d	n/d	n/d	n/d
gallic acid	1.34 ± 0.26	1.66 ± 0.29	1.32 ± 0.26	0.36 ± 0.01	0.62 ± 0.09	1.16 ± 0.01	1.06 ± 0.02	0.41 ± 0.01	0.28 ± 0.04	0.36 ± 0.03	0.17 ± 0.01	n/d	n/d	n/d	n/d
caffeic acid	n/d	0.36 ± 0.03	0.24 ± 0.01	0.23 ± 0.01	n/d	n/d	n/d	0.24 ± 0.01	0.30 ± 0.06	0.23 ± 0.01	n/d	n/d	n/d	n/d	n/d
ferulic acid	0.43 ± 0.02	0.74 ± 0.15	n/d	0.24 ± 0.01	0.25 ± 0.02	0.35 ± 0.01	0.31 ± 0.01	0.47 ± 0.06	n/d	n/d	0.05 ± 0.01	0.04 ± 0.01	n/d	n/d	n/d
resveratrol	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
resveratrol-3-glucoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
quercetin	0.81 ± 0.21	4.04 ± 0.90	6.70 ± 0.87	1.68 ± 0.22	0.05 ± 0.02	0.67 ± 0.06	0.28 ± 0.04	1.02 ± 0.02	0.99 ± 0.01	1.00 ± 0.03	n/d	n/d	n/d	n/d	n/d
myricetin	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
quercetin-3-glucoside	1.49 ± 0.32	0.40 ± 0.05	0.09 ± 0.03	n/d	n/d	1.82 ± 0.04	1.50 ± 0.22	1.64 ± 0.04	0.96 ± 0.17	1.48 ± 0.13	n/d	n/d	n/d	n/d	n/d
myricetin-3-glucoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
quercetin-3-rutinoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
peonidin-3-arabinoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin-3-arabinoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
petunidin-3-arabinoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
malvidin-3-arabinoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
cyanidin-3-glucoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
peonidin-3-glucoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin-3-glucoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
petunidin-3-glucoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
cyanidin-3-galactoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
peonidin-3-galactoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin-3-galactoside	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
cyanidin (acylated)	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
peonidin (acylated)	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
delphinidin (acylated)	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
petunidin (acylated)	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
malvidin (acylated)	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
phenylacetic acid	n/d	6.51 ± 1.31	5.46 ± 1.46	2.99 ± 0.45	10.83 ± 2.52	n/d	n/d	n/d	n/d	n/d	n/d	0.22 ± 0.04	n/d	n/d	n/d
3-hydroxyphenyl acetic acid	15.19 ± 3.73	44.55 ± 3.22	36.91 ± 3.26	16.90 ± 4.02	15.90 ± 4.08	14.44 ± 1.84	9.71 ± 0.72	11.35 ± 0.17	9.22 ± 0.37	7.85 ± 0.99	n/d	4.61 ± 0.53	4.87 ± 0.52	8.43 ± 0.59	13.64 ± 5.79
4-hydroxybenzoic acid	0.04 ± 0.02	3.87 ± 0.23	1.88 ± 0.30	0.15 ± 0.02	0.18 ± 0.02	0.07 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
3-hydroxybenzoic acid	n/d	1.18 ± 0.11	1.49 ± 0.29	2.91 ± 0.22	2.68 ± 0.38	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
3,4-dihydroxybenzoic acid	n/d	0.11 ± 0.02	0.06 ± 0.01	0.02 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	0.01 ± 0.01	n/d	0.01 ± 0.01
dihydroxybenzoic acid isomer	0.04 ± 0.01	0.05 ± 0.01	0.04 ± 0.01	0.03 ± 0.01	0.48 ± 0.04	0.05 ± 0.01	n/d	0.03 ± 0.01	0.48 ± 0.08	0.49 ± 0.12	0.01 ± 0.01	0.01 ± 0.01	n/d	n/d	n/d
3,4diHP- γ-valerolactone	n/d	0.04 ± 0.01	0.23 ± 0.02	0.11 ± 0.04	0.16 ± 0.06	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
3-hydroxyphenylpropionic acid	n/d	n/d	2.73 ± 1.55	4.49 ± 0.93	9.36 ± 1.31	n/d	n/d	n/d	0.20 ± 0.37	2.33 ± 0.87	n/d	n/d	n/d	n/d	n/d
3OH-4MEOHphenylpropionic acid	0.03 ± 0.01	0.13 ± 0.04	0.14 ± 0.02	n/d	n/d	0.05 ± 0.01	0.02 ± 0.02	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
4OH-3,5diMEOHbenzaldehyde	n/d	0.04 ± 0.01	0.02 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
4-hydroxyphenylpropionic acid	n/d	0.08 ± 0.02	0.08 ± 0.01	0.04 ± 0.01	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
hippuric acid	0.12 ± 0.13	0.85 ± 0.09	0.54 ± 0.13	0.01 ± 0.02	n/d	0.45 ± 0.032	0.14 ± 0.13	1.13 ± 0.13	0.24 ± 0.17	n/d	n/d	n/d	n/d	n/d	n/d
4-hydroxybenzaldehyde	0.48 ± 0.05	0.57 ± 0.09	0.18 ± 0.03	0.06 ± 0.01	0.06 ± 0.02	n/d	0.32 ± 0.01	0.39 ± 0.10	0.06 ± 0.02	0.07 ± 0.02	n/d	n/d	n/d	n/d	n/d
γ-valerolactone	n/d	n/d	n/d	0.29 ± 0.07	1.56 ± 0.10	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d

**n/d indicates that the species was not detected*
**Data are expressed as mean ± standard deviation from n=4 independent assessments.*

Supplemental Table 6. 12-hour fermenta treatment cellular transport (picomol/mL of basolateral media) of phenolic species in Concord and Niagara grape and 100% juice samples.

	Concord Juice					Concord Grape					Niagara Juice					Niagara Grape				
Compound (picomol/mL)	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes	5 minutes	15 minutes	30 minutes	60 minutes	120 minutes
phenylacetic acid	n/d	835 ± 281	1189 ± 444	1664 ± 433	1952 ± 213	n/d	480 ± 73	1031 ± 260	1768 ± 239	2412 ± 298	n/d	543 ± 126	778 ± 150	936 ± 212	1276 ± 146	n/d	541 ± 92	778 ± 167	1099 ± 52	1304 ± 76
3-methoxyphenylacetic acid	175 ± 14	269 ± 15	360 ± 21	465 ± 15	563 ± 19	188 ± 14	306 ± 33	409 ± 29	520 ± 33	626 ± 45	162 ± 4	245 ± 5	396 ± 82	509 ± 94	612 ± 110	170 ± 3	282 ± 12	400 ± 10	506 ± 16	603 ± 20
3-hydroxyphenylacetic acid	265 ± 35	469 ± 66	724 ± 222	1146 ± 272	1985 ± 461	159 ± 92	1188 ± 250	1148 ± 219	1767 ± 215	2263 ± 298	323 ± 112	568 ± 153	788 ± 262	1133 ± 395	1647 ± 333	272 ± 63	790 ± 318	1061 ± 249	1198 ± 225	1551 ± 165
Total phenylacetic acids	440 ± 41	1572 ± 325	2273 ± 544	3275 ± 591	4500 ± 584	251 ± 99	1974 ± 231	2588 ± 164	4055 ± 110	5302 ± 325	486 ± 115	1355 ± 105	1963 ± 193	2578 ± 613	3535 ± 476	442 ± 60	1613 ± 379	2240 ± 369	2804 ± 244	3458 ± 109
4-methoxybenzoic acid	9 ± 9	18 ± 11	39 ± 26	43 ± 24	54 ± 33	7 ± 1	15 ± 4	31 ± 4	42 ± 5	61 ± 6	3 ± 1	15 ± 6	32 ± 9	45 ± 18	61 ± 10	5 ± 1	10 ± 1	28 ± 2	31 ± 3	32 ± 4
4-hydroxybenzoic acid	121 ± 10	273 ± 15	411 ± 33	549 ± 23	745 ± 54	111 ± 14	226 ± 56	336 ± 112	409 ± 92	499 ± 116	140 ± 69	250 ± 68	385 ± 122	491 ± 186	696 ± 253	102 ± 8	177 ± 37	277 ± 29	421 ± 28	520 ± 34
3-hydroxybenzoic acid	20 ± 3	81 ± 14	106 ± 23	146 ± 24	184 ± 29	23 ± 14	79 ± 26	128 ± 24	181 ± 16	242 ± 46	38 ± 17	82 ± 4	146 ± 24	193 ± 42	243 ± 50	25 ± 8	69 ± 7	88 ± 10	129 ± 15	155 ± 18
gallic acid	89 ± 9	141 ± 1	191 ± 6	245 ± 5	293 ± 3	108 ± 12	167 ± 12	216 ± 18	276 ± 24	336 ± 46	93 ± 6	141 ± 10	192 ± 13	251 ± 26	295 ± 18	116 ± 3	174 ± 6	233 ± 16	318 ± 12	355 ± 6
Total benzoic acids	238 ± 8	513 ± 14	746 ± 60	983 ± 41	1276 ± 61	249 ± 13	487 ± 36	711 ± 110	907 ± 119	1138 ± 179	275 ± 82	488 ± 70	755 ± 140	980 ± 226	1296 ± 296	248 ± 2	430 ± 27	627 ± 32	898 ± 31	1062 ± 46
3-hydroxyphenylpropionic acid	204 ± 38	457 ± 106	744 ± 172	1016 ± 229	1317 ± 207	573 ± 89	1148 ± 104	1318 ± 123	1829 ± 209	2264 ± 252	198 ± 45	335 ± 42	608 ± 90	986 ± 98	1513 ± 100	329 ± 41	681 ± 90	1151 ± 173	1685 ± 173	2110 ± 174
4-hydroxyphenylpropionic acid	79 ± 5	150 ± 4	223 ± 10	314 ± 22	394 ± 26	122 ± 25	219 ± 48	341 ± 49	423 ± 78	515 ± 71	54 ± 18	124 ± 29	199 ± 40	262 ± 51	321 ± 52	79 ± 27	135 ± 36	219 ± 5	356 ± 11	431 ± 24
Total phenylpropionic acids	284 ± 41	606 ± 106	967 ± 173	1330 ± 247	1711 ± 226	695 ± 111	1366 ± 144	1660 ± 159	2252 ± 286	2778 ± 323	251 ± 54	459 ± 61	807 ± 124	1248 ± 123	1834 ± 143	408 ± 66	816 ± 74	1370 ± 173	2041 ± 168	2541 ± 181
4-hydroxybenzaldehyde	6 ± 2	17 ± 5	24 ± 6	37 ± 10	40 ± 8	6 ± 7	12 ± 6	16 ± 8	21 ± 8	29 ± 18	3 ± 1	5 ± 2	20 ± 21	27 ± 25	28 ± 25	17 ± 4	29 ± 6	36 ± 3	47 ± 1	63 ± 3
3-hydroxy-4-methoxybenzaldehyde	4 ± 2	8 ± 6	16 ± 12	21 ± 9	26 ± 17	122 ± 25	219 ± 48	341 ± 49	423 ± 78	515 ± 71	2 ± 2	8 ± 3	16 ± 6	21 ± 6	23 ± 4	1 ± 1	4 ± 1	9 ± 2	16 ± 1	18 ± 1
Total benzaldehydes	10 ± 1	23 ± 6	40 ± 14	58 ± 11	66 ± 18	8 ± 6	20 ± 12	30 ± 16	40 ± 18	55 ± 29	5 ± 3	13 ± 5	36 ± 26	48 ± 31	51 ± 28	18 ± 4	33 ± 6	45 ± 5	63 ± 1	81 ± 4
3,4diHP-γ-valerolactone	6 ± 4	8 ± 6	9 ± 5	11 ± 2	13 ± 3	5 ± 2	8 ± 3	11 ± 8	13 ± 8	17 ± 14	2 ± 2	5 ± 3	6 ± 4	6 ± 4	9 ± 5	3 ± 3	5 ± 2	8 ± 2	10 ± 3	11 ± 4

**n/d indicates that the species was not detected*
**Data are expressed as mean ± standard deviation from n=4 independent assessments.*