

Appendix 1

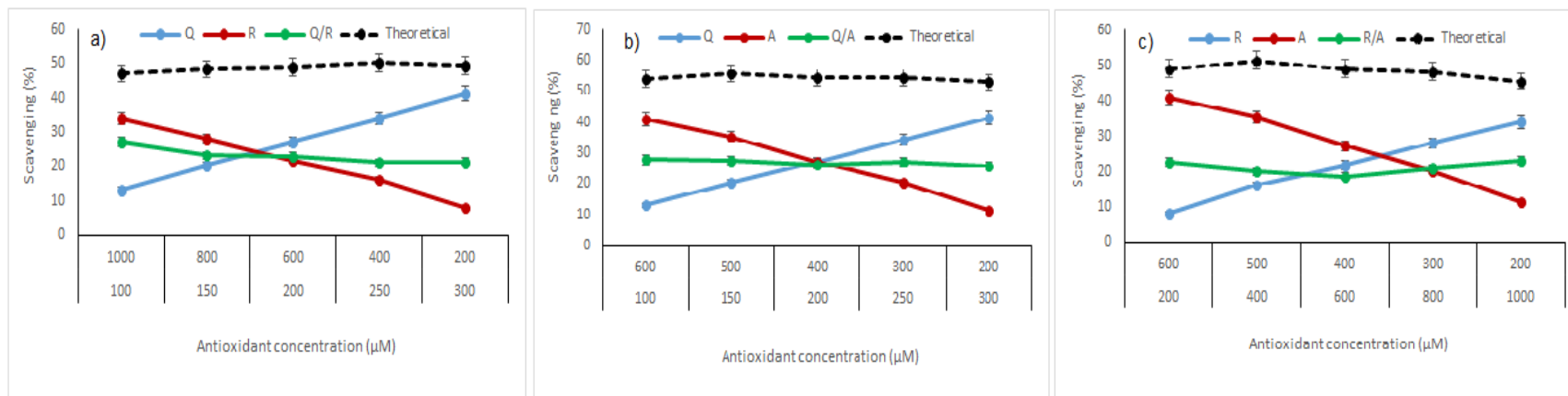


Figure S₁ The radical scavenging assay in binary mixtures of a) quercetin/resveratrol(Q/R), b) quercetin/ascorbic acid (Q/A), and c) resveratrol/ascorbic acid (R/A)

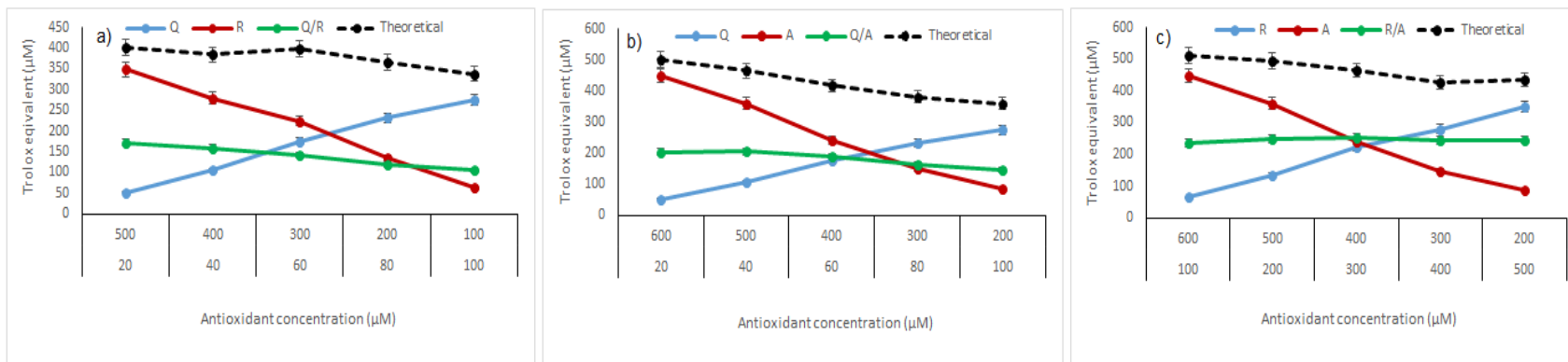


Figure S₂ The reducing power assay in binary mixtures of a) quercetin/resveratrol(Q/R), b) quercetin/ascorbic acid (Q/A), and c) resveratrol/ascorbic acid (R/A)

Table S₁ The results of antioxidant activity consideration in binary mixtures of antioxidants

Antioxidant				Antioxidant				Antioxidant			
Q/R				Q/A				R/A			
DPPH results	E	T	%D	DPPH results	E	T	%D	DPPH results	E	T	%D
100/1000	27.05±3.66	47.11	-42.56	100/600	27.78±1.57	54.14	-48.69	200/600	22.46±2.42	49.07	-54.21
150/800	23.1±1.23	48.31	-52.18	150/500	27.71±1.28	55.68	-50.21	400/500	20.08±0.4	51.48	-60.99
200/600	22.86±0.77	48.98	-53.32	200/400	26.15±1.28	54.44	-51.96	600/400	18.69±0.47	49.07	-61.9
250/400	21.02±1.78	50.3	-58.21	250/300	27.02±0.55	54.47	-50.38	800/300	20.8±1.13	48.28	-56.9
300/200	21.32±1.09	49.46	-56.89	300/200	25.87±1.58	52.87	-51.05	1000/200	22.92±0.86	45.45	-49.56

Antioxidant				Antioxidant				Antioxidant			
Q/R				Q/A				R/A			
FRAP results	E	T	%D	FRAP results	E	T	%D	FRAP results	E	T	%D
20/500	172.4±6.15	401.2	-57.02	20/600	202.53±6.89	500	-59.49	100/600	236.26±15.97	511.86	-53.84
40/400	159.06±10.26	384.13	-58.59	40/500	204±10.09	464.8	-56.11	200/500	248.13±6.2	494.13	-49.78
60/300	141.2±6	398	-64.52	60/400	188.93±14	416.53	-54.64	300/400	250.8±5.76	464.93	-46.05
80/200	118±6.03	366.26	-67.78	80/300	163.06±8.94	380.4	-57.13	400/300	243.6±8.11	427.6	-43.03
100/100	105.2±2.77	338	-68.87	100/200	146±4.05	360	-59.44	500/200	246.26±1.89	435.06	-43.39

Data analysis for DPPH assay of quercetin, resveratrol, and ascorbic acid at concentration range of 50-250 μ M

Source of variation	Df	Mean of squares
Concentration	4	507.515371 *
Antioxidant	2	1155.478806 *
Concentration $\times$ Antioxidant	8	47.401711 *
Error	30	3.403302

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for FRAP assay of quercetin, resveratrol, and ascorbic acid at concentration range of 50-250 μ M

Source of variation	Df	Mean of squares
Concentration	4	79033.6124 *
Antioxidant	2	425307.5342 *
Concentration $\times$ Antioxidant	8	17630.3964 *
Error	30	341.9698

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for DPPH assay of binary mixtures of quercetin, resveratrol, and ascorbic acid at concentration range of 50-250 μ M

Source of variation	Df	Mean of squares
Concentration	4	93.7642290 *
Antioxidant	2	374.5017290 *
Concentration $\times$ Antioxidant	8	38.7005242 *
Error	30	1.974192

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for FRAP assay of binary mixtures of quercetin, resveratrol, and ascorbic acid at concentration range of 50-250 μ M

Source of variation	Df	Mean of squares
Concentration	4	62411.6924*
Antioxidant	2	200143.1849*
Concentration $\times$ Antioxidant	8	9921.3804*
Error	30	69.06667

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for DPPH assay of quercetin, resveratrol, and ascorbic acid at concentration range of 100-500 μ M

Source of variation	Df	Mean of squares
Concentration	4	1249.975158*
Antioxidant	2	2767.662477*
Concentration $\times$ Antioxidant	8	122.858380*
Error	30	2.048683

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for FRAP assay of quercetin, resveratrol, and ascorbic acid at concentration range of 100-500 μ M

Source of variation	Df	Mean of squares
Concentration	4	366650.871*
Antioxidant	2	1461053.166*
Concentration $\times$ Antioxidant	8	83935.015*
Error	30	354.0373

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for DPPH assay of binary mixtures of quercetin, resveratrol, and ascorbic acid at concentration range of 100-500 μ M

Source of variation	Df	Mean of squares
Concentration	4	279.976027*
Antioxidant	2	1256.598561*
Concentration $\times$ Antioxidant	8	104.504642*
Error	30	4.57077

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for FRAP assay of binary mixtures of quercetin, resveratrol, and ascorbic acid at concentration range of 100-500 μ M

Source of variation	Df	Mean of squares
Concentration	4	209289.232*
Antioxidant	2	778662.168*
Concentration $\times$ Antioxidant	8	44195.888*
Error	30	529.5467

* is an index of significant difference at $p < 0.05$ by Duncan test

Data analysis for difference percent in binary mixture of quercetin/resveratrol using DPPH test

Source of variation	Df	Mean of squares
Concentration ranges (50-250µM and 100-500µM)	1	38.862789 ^{ns}
Ratios	4	329.929995 *
Concentration range × ratio	4	14.005404 ^{ns}
Error	20	36.92644

* is an index of significant difference and “ns” is index of insignificant difference at p< 0.05 by Duncan test

Data analysis for difference percent in binary mixture of quercetin/resveratrol using FRAP test

Source of variation	Df	Mean of squares
Concentration ranges (50-250µM and 100-500µM)	1	53.695854 ^{ns}
Ratios	4	326.678707 *
Concentration range × ratio	4	25.969264 ^{ns}
Error	20	14.41888

* is an index of significant difference and “ns” is index of insignificant difference at p< 0.05 by Duncan test

Data analysis for difference percent in binary mixture of quercetin/ascorbic acid using DPPH test

Source of variation	Df	Mean of squares
Concentration ranges (50-250µM and 100-500µM)	1	48.1280398^{ns}
Ratios	4	70.1935520^{ns}
Concentration range × ratio	4	23.9165960^{ns}
Error	20	34.81296

“ns” is index of insignificant difference at $p < 0.05$ by Duncan test

Data analysis for difference percent in binary mixture of quercetin/ascorbic acid using FRAP test

Source of variation	Df	Mean of squares
Concentration ranges (50-250µM and 100-500µM)	1	529.144674*
Ratios	4	436.248363*
Concentration range × ratio	4	7.548797^{ns}
Error	20	14.54672

* is an index of significant difference and “ns” is index of insignificant difference at $p < 0.05$ by Duncan test

Data analysis for difference percent in binary mixture of resveratrol/ascorbic acid using DPPH test

Source of variation	Df	Mean of squares
Concentration ranges (50-250µM and 100-500µM)	1	482.3251494^{ns}
Ratios	4	97.8143732^{ns}
Concentration range × ratio	4	81.4136556^{ns}
Error	20	118.4199

“ns” is index of insignificant difference at $p < 0.05$ by Duncan test

Data analysis for difference percent in binary mixture of resveratrol/ascorbic acid using FRAP test

Source of variation	Df	Mean of squares
Concentration ranges (50-250µM and 100-500µM)	1	663.7168102*
Ratios	4	133.3037957*
Concentration range × ratio	4	19.3724035^{ns}
Error	20	40.99436

* is an index of significant difference and “ns” is index of insignificant difference at $p < 0.05$ by Duncan test