

Table S1. ANOVA Summary Table for pH

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	1.376178	2	0.688089	604.1756	9.04E-13
Brewing Methods	0.330756	1	0.330756	290.4195	8.96E-10
Interaction	0.019911	2	0.009956	8.741463	0.004546
Within	0.013667	12	0.001139		
Total	1.740511111	17			

Table S2. ANOVA Summary Table for Total Titratable Acidity (TTA)

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	26.01741	2	13.00871	1558.966	3.18E-15
Brewing Methods	0.597689	1	0.597689	71.62716	2.1E-06
Interaction	0.106411	2	0.053206	6.376165	0.012983
Within	0.100133	12	0.008344		
Total	26.82164	17			

Table S3. ANOVA Summary Table for Total Dissolved Solids (TDS)

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	0.46283033	2	0.23141517	101.6	5.6146E-18
Brewing Methods	0.1526415	1	0.1526415	67.0153846	1.1534E-10
Interaction	0.041209	2	0.0206045	9.04615385	0.00046363
Within	0.10933	48	0.00227771		
Total	0.76601083	53			

Table S4. ANOVA Summary Table for Brownd Compounds

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	0.226833	2	0.113417	710.5567	5.39E-26

Brewing Methods	0.40896	1	0.40896	2562.14	1.3E-30
Interaction	0.10312	2	0.05156	323.0244	5.1E-21
Within	0.004789	30	0.00016		
Total	0.743702	35			

Table S5. ANOVA Summary Table for Caffeine

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	101364.8	2	50682.39	23.22708	8.8E-08
Brewing Methods	8346.329	1	8346.329	3.825014	0.056327
Interaction	19211.84	2	9605.921	4.402269	0.017563
Within	104737.9	48	2182.039		
Total	233660.8	53			

Table S6. ANOVA Summary Table for Total CQA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	14095067	2	7047533	9660.225	2.88E-63
Brewing Methods	666.7089	1	666.7089	0.913874	0.343879
Interaction	525.3809	2	262.6905	0.360076	0.699491
Within	35017.98	48	729.5413		
Total	14131277	53			

Table S7. ANOVA Summary Table for Total Antioxidant Activities (TAC)

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	23.9262	2	11.9631	71.3637	4.17E-15
Brewing Methods	76.70594	1	76.70594	457.5753	3.46E-26
Interaction	17.7527	2	8.876348	52.95023	7.18E-13

Within	8.046512	48	0.167636
Total	126.4314	53	

Table S8. ANOVA Summary Table for 5-CQA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	3673887.15	2	1836943.57	7788.64327	4.9879E-61
Brewing Methods	864.010993	1	864.010993	3.66340779	0.06159219
Interaction	3293.52552	2	1646.76276	6.98227635	0.00217947
Within	11320.7511	48	235.84898		
Total	126.4314	53			

Table S9. ANOVA Summary Table for 4-CQA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	997385.698	2	498692.849	4656.05037	1.0941E-55
Brewing Methods	305.594701	1	305.594701	2.85318773	0.09767962
Interaction	50.9817054	2	25.4908527	0.23799558	0.78913073
Within	5141.10778	48	107.106412		
Total	1002883.38	53			

Table S10. ANOVA Summary Table for 3-CQA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Degrees of Roast	704752.386	2	352376.193	5421.97688	2.8791E-57
Brewing Methods	1423.81735	1	1423.81735	21.9081337	2.3702E-05
Interaction	1162.14942	2	581.07471	8.94093784	0.0005005
Within	3119.53696	48	64.9903534		
Total	710457.89	53			