Table S1. Numerical data representing color of untreated coffee beans as measured in the CIELab system

Parameter /sample	Green beans		Roasted beans	
	Arabica	**Robusta**	**Arabica**	**Robusta**
L*	63.83 ± 0.52	63.82 ± 0.28	29.14 ± 2.2 [b]	33.46 ± 1.06 [a]
a*	1.85 ± 0.08 [b]	2.25 ± 0.10 [a]	10.17 ± 0.35	9.73 ± 0.73
b*	16.63 ± 0.17	16.51 ± 0.24	8.56 ± 1.49	8.32 ± 1.41

All results expressed as mean value ± standard deviation; n.d. - not detected. Lowercase letters indicate statistical differences between Arabica and Robusta bean in green/roasted group.

Table S2. Numerical data representing coffee beans color of controls and modified samples as measured in the CIELab system

Parameter /sample	Pepsin						Trypsin and α-amylase					
	3		6		12		3		6		12	
	Control	Modified	Control	Modified	Control	Modified	Control	Modified	Control	Modified	Control	Modified
	Green Arabica beans											
L*	60.63 ± 0.14 b	60.60 ± 1.10	61.55 ± 0.55 ab	62.22 ± 0.36	61.91 ± 0.48 a	63.45 ± 1.43	60.05 ± 0.35	60.29 ± 0.41	60.36 ± 0.31	59.86 ± 0.66	60.15 ± 0.08	60.16 ± 1.42
a*	3.10 ± 0.10 *	3.38 ± 0.17 A*	3.02 ± 0.08 *	2.54 ± 0.05 B*	2.92 ± 0.15 *	2.29 ± 0.16 B*	3.44 ± 0.09 b	3.30 ± 0.12	3.50 ± 0.11 ab*	3.23 ± 0.06 *	3.67 ± 0.07 a*	3.46 ± 0.13 *
b*	18.59 ± 0.16 *	19.3 ± 0.17 *	18.55 ± 0.25 *	17.94 ± 0.29 *	18.23 ± 0.27 *	17.39 ± 0.1 *	17.97 ± 0.19 b*	18.73 ± 0.17 a*	18.79 ± 0.24 a*	17.88 ± 0.22 b*	18.97 ± 0.05 a*	17.7 ± 0.05 b*
	Green Robusta beans											
L*	53.02 ± 0.08 *	57.00 ± 0.24 *	55.79 ± 0.17 *	57.27 ± 0.17 *	56.42 ± 0.42 *	57.37 ± 0.44 *	54.13 ± 0.34 *	56.05 ± 0.48 a*	54.43 ± 0.18	55.1 ± 0.55 b	52.54 ± 0.28 *	56.76 ± 0.37 a*
a*	3.55 ± 0.13 a*	2.69 ± 0.12 B*	3.23 ± 0.01 b*	2.95 ± 0.04 A*	3.04 ± 0.11 b	2.99 ± 0.09 A	3.48 ± 0.06 *	2.97 ± 0.04 B*	3.72 ± 0.09 *	3.4 ± 0.12 A*	3.86 ± 0.01 *	3.14 ± 0.03 B*
b*	16.98 ± 0.29 b*	18.36 ± 0.55 A*	17.31 ± 0.12 ab	16.41 ± 0.78 B	17.53 ± 0.16 a	17.21 ± 0.27 AB	16.93 ± 0.05 c	16.63 ± 0.36	17.5 ± 0.17 a*	16.05 ± 0.22 *	17.18 ± 0.11 b*	16.49 ± 0.31 *
	Roasted Arabica beans											
L*	35.35 ± 0.03 b	35.01 ± 0.44 B	34.83 ± 0.80 b	35.47 ± 0.93 AB	37.49 ± 0.12 a*	36.44 ± 0.27 A*	34.71 ± 0.75 c*	32.19 ± 0.80 B*	35.60 ± 0.46 b*	32.44 ± 0.19 AB*	38.35 ± 0.18 a*	33.59 ± 0.44 A*
a*	10.29 ± 0.02 a*	9.95 ± 0.02 B*	10.28 ± 0.17 b	9.93 ± 0.20 B	10.11 ± 0.10 b	10.44 ± 0.05 A*	10.39 ± 0.08 b	10.6 ± 0.30 B	10.88 ± 0.06 a	10.8 ± 0.16 AB	10.52 ± 0.06 b*	11.24 ± 0.31 A*
b*	9.86 ± 0.60 b	9.75 ± 0.50 B	10.35 ± 0.20 ab	9.61 ± 0.80 B	11.05 ± 0.21 a	11.71 ± 0.71 A	10.85 ± 0.19 c*	13.41 ± 0.98 B*	12.70 ± 0.14 a*	13.53 ± 0.34 B*	11.29 ± 0.10 b*	15.97 ± 0.56 A*
	Roasted Robusta beans											
L*	34.38 ± 0.17 b	32.12 ± 2.42 B	35.28 ± 0.75 b	34.27 ± 0.5 AB	37.32 ± 0.31 a	36.11 ± 0.7 A	31.73 ± 0.54 c*	34.82 ± 0.15 B*	34.09 ± 0.64 b*	35.93 ± 0.63 A*	35.55 ± 0.38 a	36.18 ± 0.43 A
a*	9.92 ± 0.07	10.1 ± 0.46	9.89 ± 0.05	9.85 ± 0.02	9.43 ± 0.14 *	9.82 ± 0.19 *	10.35 ± 0.11 a*	9.82 ± 0.14 *	9.93 ± 0.08 b	10.04 ± 0.13	9.86 ± 0.27 b	9.98 ± 0.13
b*	11.28 ± 0.09 *	13 ± 0.66 *	11.33 ± 0.05	10.94 ± 0.18	8.32 ± 0.21	10.82 ± 0.4	14.24 ± 0.64 a*	10.53 ± 0.47 *	10.31 ± 0.06 c	11.25 ± 0.81	11.63 ± 0.61 b	11.24 ± 0.06

All results expressed as mean value ± standard deviation; n.d. - not detected. Lowercase letters indicate significant differences between control samples at different modification times. Uppercase letters indicate significant differences between modified samples at different modification times.
* indicates significant difference between control and modified samples at the same modification time.