

**Table S1.** Blends composition.

Blend (%)						
Natural Arabica Coffee Brazil	Natural Arabica Coffee Brazil	Washed Arabica Coffee Colombia	Washed Arabica Coffee Honduras	B1	B2	C
						H
		Arabica X				
Barley 1	Barley 2		Rice 1		Rice 2	
	Barley Y			Rice Y		
Corn 1	Corn 2		Coffee husks 1		Coffee husks 2	
	Corn Y			Coffee husks Y		
Soy 1	Soy 2		Robusta 1		Robusta 2	
	Soy Y			Robusta Y		
Arabica X	Barley Y	Corn Y	Soy Y	Rice Y	Coffee husks Y	Robusta Y
99.8	0.25	-	-	-	-	-
99.8	-	0.25	-	-	-	-
99.8	-	-	0.25	-	-	-
99.8	-	-	-	0.25	-	-
99.8	-	-	-	-	0.25	
99.8	-	-	-	-	-	0.25
99.5	0.5	-	-	-	-	-
99.5	-	0.5	-	-	-	-
99.5	-	-	0.5	-	-	-
99.5	-	-	-	0.5	-	-
99.5	-	-	-	-	0.5	-
99.5	-	-	-	-	-	0.5
99.0	0.5	-	-	-	0.5	-
99.0	-	0.5	-	-	0.5	-
99.0	-	-	0.5	-	0.5	-
99.0	-	-	-	0.5	0.5	-
99.0	-	-	-	-	0.5	0.5
98.5	0.5	0.5	0.5	-	-	-
98.5	-	0.5	-	-	0.5	0.5
98.0	0.5	0.5	0.5	-	-	0.5
98.0	0.5	0.5	0.5	0.5	-	-
98.0	0.5	0.5	0.5	-	0.5	-
97.5	0.5	0.5	0.5	0.5	0.5	-
99.0	1	-	-	-	-	-
99.0	-	1	-	-	-	-
99.0	-	-	1	-	-	-
99.0	-	-	-	1	-	-
99.0	-	-	-	-	1	-
99.0	-	-	-	-	-	1
98.0	1	-	-	-	1	-
98.0	-	1	-	-	1	-
98.0	-	-	1	-	1	-

98.0	-	-	-	1	1	-
98.0	-	-	-	-	1	1
97.0	1	1	1	-	-	-
97.0	-	1	-	-	1	1
96.0	1	1	1	1	-	-
96.0	1	1	1	-	1	
96.0	1	1	1	-	-	1
95.0	1	1	1	1	1	-
95.0	5	-	-	-	-	-
95.0	-	5	-	-	-	-
95.0	-	-	5	-	-	-
95.0	-	-	-	5	-	-
95.0	-	-	-	-	5	-
95.0	-	-	-	-	-	5
90.0	5	-	-	-	5	-
90.0	-	5	-	-	5	-
90.0	-	-	5	-	5	-
90.0	-	-	-	5	5	-
90.0	-	-	-	-	5	5
85.0	5	5	5	-	-	
85.0	-	5	-	-	5	5
80.0	5	5	5	5	-	
80.0	5	5	5	-	-	5
80.0	5	5	5	-	5	-
75.0	5	5	5	5	5	-
70.0	5	5	5	5	5	5
90.0	10	-	-	-	-	-
90.0	-	10	-	-	-	-
90.0	-	-	10	-	-	-
90.0	-	-	-	10	-	-
90.0	-	-	-	-	10	-
90.0	-	-	-	-	-	10
80.0	10	-	-	-	10	-
80.0	-	10	-	-	10	-
80.0	-	-	10	-	10	-
80.0	-	-	-	10	10	-
80.0	-	-	-	-	10	10
80.0	-	20.0	-	-	-	-
80.0	-	-	-	-	20.0	-
80.0	-	-	-	-	-	20.0
60.0	-	-	-	-	-	40.0
40.0	-	-	-	-	-	60.0
20.0	-	-	-	-	-	80.0

All samples were prepared in triplicate.

X- 25% mixture of B1:B2:C:H; Y- 50% mixture of the adulterant batch 1 and 2.

**Table S2.** Prevalence of each adulterant in the blends

%	<b>Barley</b>	<b>Corn</b>	<b>Soybean</b>	<b>Rice</b>	<b>coffee husks</b>	<b>Robusta coffee</b>
number of combinations prepared with each of the adulterants						
0,25	1	1	1	1	1	-
0,5	7	7	7	4	9	4
1	7	7	7	4	9	4
5	7	7	7	4	9	4
10	2	2	2	2	6	2
20	-	1	-	-	1	1
40	-	-	-	-	-	1
60	-	-	-	-	-	1
80	-	-	-	-	-	1

**Table S3.** Root mean square errors of calibration (RMSEC) and cross-validation (RMSECV) of the PCA models developed in this study. PCA models were identified through their figure numbers in the manuscript.

<b>PCA model</b>	<b>RMSEC</b>	<b>RMSECV</b>
<b>Figure 1</b>	$3.8 \times 10^{-5}$	$1.8 \times 10^{-4}$
<b>Figure 2</b>	$9.1 \times 10^{-5}$	$1.4 \times 10^{-4}$
<b>Figure 3</b>	$1.1 \times 10^{-4}$	$2.5 \times 10^{-4}$
<b>Figure 4</b>	$1.7 \times 10^{-4}$	$3.0 \times 10^{-4}$
<b>Figure 5A</b>	$1.6 \times 10^{-4}$	$3.5 \times 10^{-4}$
<b>Figure 5B</b>	$1.8 \times 10^{-5}$	$3.1 \times 10^{-4}$
<b>Figure 5C</b>	$8.2 \times 10^{-5}$	$3.3 \times 10^{-4}$