

Exploring the potential of the phenolic compounds from the coffee pulp in preventing cellular oxidative stress after *in vitro* digestion

Silvia Cañas^{1,2}, Miguel Rebollo-Hernanz^{1,2}, María Martín-Trueba^{1,2}, Cheyenne Braojos^{1,2}, Alicia Gil-Ramirez^{1,2}, Vanesa Benítez^{1,2}, María A. Martín-Cabrejas^{1,2}, Yolanda Aguilera^{1,2*}

¹ Department of Agricultural Chemistry and Food Science, Faculty of Science, C/ Francisco Tomás y Valiente, 7. Universidad Autónoma de Madrid, 28049, Madrid, Spain.

² Institute of Food Science Research (CIAL, UAM-CSIC). C/ Nicolás Cabrera, 9. Universidad Autónoma de Madrid, 28049, Madrid, Spain.

*Corresponding author: Yolanda Aguilera

E-mail address: yolanda.aguilera@uam.es

Supplementary Table 1. Correlation coefficients between phenolic compounds and methylxanthines, and the radical scavenging, cytoprotective properties, and cellular antioxidant activity in the coffee pulp flour (CPF) and extract (CPE).

Compounds	TPC	ABTS	FRAP	O ₂ ⁻	H ₂ O ₂	NO	ONOO ⁻	V IEC6	V HepG2	ROS IEC-6	ROS HepG2
Coffee pulp flour											
<i>Hydroxybenzoic acids</i>											
Gallic acid	-0.990**	-0.968*	-0.848	-0.930*	-0.532	-0.958*	-0.847	-0.750	-0.878	-0.772	-0.984**
Protocatechuic acid	0.366	0.448	0.506	0.217	0.839	0.167	-0.313	0.637	0.638	0.579	0.260
<i>Total</i>	0.046	0.138	0.237	-0.086	0.684	-0.147	-0.603	0.404	0.363	0.337	-0.060
<i>Hydroxycinnamic acids</i>											
3-Caffeoylquinic acid, 3-CQA	0.968*	0.978*	0.892	0.869	0.757	0.871	0.584	0.860	0.974*	0.856	0.926*
4-Caffeoylquinic acid, 4-CQA (<i>cis</i>)	0.972*	0.977*	0.914*	0.855	0.609	0.897	0.831	0.826	0.905*	0.851	0.941*
4-Caffeoylquinic acid, 4-CQA (<i>trans</i>)	-0.296	-0.194	-0.043	-0.416	0.470	-0.475	-0.832	0.144	0.046	0.077	-0.398
5-Caffeoylquinic acid, 5-CQA	0.947	0.861	0.605	0.991*	0.582	0.998*	0.999*	0.574	0.800	0.550	0.992*
3,5-Dicaffeoylquinic acid, 3,5-diCQA	0.621	0.674	0.661	0.500	0.862	0.457	-0.028	0.745	0.808	0.698	0.537
5- <i>p</i> -Coumaroylquinic acid, 5-CoQA	0.545	0.580	0.535	0.472	0.772	0.413	-0.117	0.625	0.716	0.572	0.479
<i>Total</i>	0.153	0.265	0.396	-0.033	0.802	-0.076	-0.495	0.556	0.489	0.495	0.028
<i>Flavones</i>											
Apigenin-6,8-di-C-glucoside	-0.072	0.104	0.413	-0.396	0.728	-0.372	-0.428	0.557	0.315	0.529	-0.240
<i>Flavonols</i>											
Quercetin-3,7-di- <i>O</i> -glucoside	0.513	0.677	0.905	0.080	0.917	0.150	0.240	0.920	0.754	0.931	0.327
Quercetin-3- <i>O</i> -rutinoside	0.283	0.473	0.771	-0.171	0.789	-0.100	-0.009	0.794	0.567	0.812	0.082
Quercetin-3- <i>O</i> -glucoside	0.283	0.410	0.566	0.047	0.906*	0.024	-0.340	0.710	0.622	0.659	0.143
<i>Total</i>	-0.356	-0.238	-0.045	-0.510	0.465	-0.556	-0.846	0.145	0.006	0.083	-0.471
<i>Methylxanthines</i>											
Caffeine	0.921*	0.973*	0.974*	0.739	0.864	0.760	0.544	0.960*	0.999**	0.959*	0.843

Coffee pulp extract*Hydroxybenzoic acids*

Gallic acid	-0.686	-0.443	0.686	0.449	0.096	-0.479	0.934*	-0.404	-0.864	0.682	0.583
Protocatechuic acid	-0.924*	-0.988**	0.956*	0.880	-0.765	-0.104	0.613	-0.509	-0.079	0.986**	0.973*
<i>Total</i>	-0.941*	-0.905*	0.966*	0.825	-0.547	-0.247	0.792	-0.527	-0.362	0.987**	0.943*

Hydroxycinnamic acids

3-Caffeoylquinic acid, 3-CQA	-0.743	-0.955	0.813	0.651	-0.962	-0.844	0.962	-0.083	-0.493	0.904	0.995*
4-Caffeoylquinic acid, 4-CQA (<i>cis</i>)	-0.645	-0.267	0.556	0.738	0.304	0.563	0.242	-0.993*	-0.854	0.399	0.064
4-Caffeoylquinic acid, 4-CQA (<i>trans</i>)	-0.880	-0.959*	0.888	0.956*	-0.888	0.302	0.251	-0.669	0.200	0.876	0.808
3,5-Dicaffeoylquinic acid, 3,5-diCQA	-0.771	-0.434	0.695	0.846	0.130	0.407	0.410	-0.998*	-0.933	0.555	0.240
<i>Total</i>	-0.576	-0.378	0.593	0.311	0.146	-0.645	0.976*	-0.215	-0.859	0.618	0.577

Flavones

Apigenin-6,8-di-C-glucoside	-0.840	-0.987*	0.884	0.827	-0.860	-0.099	0.513	-0.391	0.100	0.934	0.969*
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Flavonols

Quercetin-3- <i>O</i> -rutinoside	-0.862	-0.993**	0.903*	0.849	-0.851	-0.078	0.519	-0.429	0.075	0.946*	0.968*
Quercetin-3- <i>O</i> -glucoside	-0.888	-0.997**	0.924*	0.874	-0.839	-0.053	0.526	-0.475	0.046	0.959*	0.964*
<i>Total</i>	-0.871	-0.994**	0.910*	0.858	-0.847	-0.070	0.521	-0.444	0.066	0.951*	0.935*

Methylxanthines

Caffeine	-0.871	-0.997**	0.907*	0.877	-0.873	-0.005	0.468	-0.474	0.110	0.940*	0.947*
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TPC: Total Phenolic Content; ABTS: ABTS antioxidant capacity; FRAP: FRAP antioxidant capacity; O^{2•-}: O^{2•-} scavenging; H₂O₂: H₂O₂ scavenging; NO: NO scavenging; ONOO⁻: ONOO⁻ scavenging; V-IEC-6: t-BHP-viability in IEC-6 cells; V-HepG2: t-BHP-viability in viability HepG2 cells; ROS IEC-6: ROS production in IEC-6 cells; ROS HepG2: ROS production in HepG2 cells.