Supplemental material

Table A1. Experimental domain and codification of independent variables in the *CCCD* factorial design with 5 range levels.

CODED VALUES	**NATURAL VALUES**		
	t (min)	*T (ºC)*	*S (%)*
-1.68	20	25	0
-1	40,3	37,2	20.3
0	70	55	50
+1	99,7	72,8	79.7
+1.68	120	85	100

Table A2. Mathematical models of the extraction process derived from the second-order polynomial model with interactions of Eq. (1).

Extraction yield	$Y_{Yield} = 40.8 + 1.75t + 2.92T - 3.86S - 5.56S^2 + 0.63tS + 0.43TS$	Eq. (3)
Hydrolysable tannins (Hta)	$Y_{Elg} = 9.34 - 2.68t + 2.34T - 6.5S + 2.38t^2 - 3.04S^2 + 1.76TS$	Eq. (4)
Flavonoids (Fla)	$Y_{Fla} = 5.56 - 0.72t - 1.12S + 0.53t^2 + 1.28S^2 - 0.65tS + 0.89TS$	Eq. (5)
Total Phenolics (Phe)	$Y_{Phe} = 14.9 - 3.4t + 2.11T - 7.62S + 2.91t^2 + 4.32S^2 - 0.87tS + 2.65TS$	Eq. (6)
Compound P5	$Y_{P5} = 0.37 - 0.31t + 0.37t^2 + 0.37T^2 + 0.412S^2 - 0.12tT - 0.39tS + 0.15TS$	Eq. (7)
Compound P7	$Y_{P7} = 7.88 - 1.68t + 2.09t^2 - 6.15S + 2.81t^2 + 1.02tT + 1.25tS$	Eq. (8)
Compound P8	$Y_{P8} = 1.22 - 0.17T - 0.43S + 0.33t^2 + 0.28S^2 - 0.2tT - 0.37tS + 0.39TS$	Eq. (9)
Compound P9	$Y_{P9} = 1.55 - 0.23t - 0.13T - 0.17S + 0.15S^2 + 0.19tT + 0.14tS + 0.24TS$	Eq. (10)
Compound P11	$Y_{P11} = 1.06 - 0.06t - 0.29S + 0.19S^2$	Eq. (11)
Compound P13	$Y_{P13} = 0.64 - 0.1t - 0.05T + 0.05S + 0.15S^2 - 0.05tS$	Eq. (12)
Compound P14	$Y_{P14} = 0.51 - 0.08t + 0.04T + 0.02S + 0.04t^2 + 0.06S^2 + 0.02tT - 0.04tS + 0.07TS$	Eq. (13)
Compound P1,2,3,4,6,10,12	$Y_{Minor} = 2.61 - 0.89t - 0.53S + 1.35S^2 - 1.12tT - 1.40tS + 1.53TS$	Eq. (14)

Table A3: Parametric results of the dose-response model of Eq. (2) for of all the response values assessed in terms of the variation of the *S/L* ratio: *Extraction yield* (%), T. hydrolysable tannins (*Hta*), T. Flavonoids (*Fla*), T. Phenolics (*Phe*) and major (*P5*, *P7*, *P8*, *P9*, *P11*, *P13* and *P14*) and minor (*P1*, *P2*, *P3*, *P4*, *P6*, *P10* and *P12*) compounds. The underlined values were obtained with an increasing dose-response model of Eq. (2) using the $m_{99\%}$ as response criteria.

	K	$m_{50\%}$ or $m_{99\%}$	a	R^2
Extraction yield	54.96±3.85	258.40±25.24	0.22±0.02	0.9241
Hydrolysable tannins (Hta)	85.73±5.14	<u>165.69</u>±7.12	0.86±0.01	0.9836
Flavonoids (Fla)	35.35±4.45	31.01±3.89	0.44±0.03	0.9436
Total Phenolics (Phe)	205.40±18.49	<u>337.80</u>±11.56	0.33±0.01	0.9482
Compound P5	8.65±0.78	<u>112.81</u>±3.39	0.84±0.08	0.9479
Compound P7	47.62±2.38	<u>124.35</u>±7.39	0.79±0.08	0.9696
Compound P8	17.92±1.43	10.28±0.72	0.43±0.01	0.9189
Compound P9	4.31±0.30	379.82±25.19	1.00±0.05	0.9457
Compound P11	3.12±0.09	253.13±24.25	1.02±0.09	0.9249
Compound P13	3.58±0.29	17.62±0.18	0.44±0.01	0.9563
Compound P14	2.58±0.13	28.93±0.29	0.94±0.09	0.8648
Compound P1,2,3,4,6,10,12	116.59±8.16	<u>482.16</u>±8.89	0.79±0.04	0.9676