

**Table S1.** Content of rutin and rosmarinic acid in extracts obtained with different solvents and under different conditions

Type of solvent	Extraction parameters			Rosmarinic Acid ( $\mu\text{g}/\text{mg}$ )	DPPH Inhibition (%)
	Water Content (%)	Temperature of Extraction (°C)	Rutin ( $\mu\text{g}/\text{mg}$ )		
ChCl-U	10	30	2.67 ± 0.70 <sup>bcd</sup>	0.92 ± 0.05 <sup>wxy</sup>	13.07 ± 1.35 <sup>w</sup>
		50	9.47 ± 0.57 <sup>m-r</sup>	5.66 ± 0.61 <sup>c-j</sup>	66.30 ± 1.22 <sup>m-p</sup>
		70	9.56 ± 0.92 <sup>m-q</sup>	7.42 ± 1.20 <sup>ab</sup>	84.49 ± 1.36 <sup>f</sup>
	30	30	4.45 ± 1.03 <sup>y-B</sup>	1.61 ± 0.45 <sup>t-y</sup>	50.15 ± 2.20 <sup>r</sup>
		50	10.80 ± 0.69 <sup>i-n</sup>	6.80 ± 0.09 <sup>a-d</sup>	76.92 ± 1.34 <sup>hi</sup>
		70	9.63 ± 0.16 <sup>l-q</sup>	7.85 ± 0.32 <sup>a</sup>	82.61 ± 1.02 <sup>fg</sup>
	50	30	7.25 ± 0.76 <sup>t-w</sup>	5.21 ± 0.57 <sup>e-l</sup>	77.40 ± 0.86 <sup>hi</sup>
		50	9.30 ± 1.22 <sup>n-s</sup>	6.57 ± 0.11 <sup>a-f</sup>	78.09 ± 3.02 <sup>gh</sup>
		70	8.24 ± 0.37 <sup>o-u</sup>	7.40 ± 0.11 <sup>ab</sup>	75.48 ± 3.02 <sup>hij</sup>
ChCl-Sor	10	30	1.40 ± 0.03 <sup>CD</sup>	1.34 ± 0.01 <sup>t-y</sup>	24.92 ± 0.43 <sup>u</sup>
		50	6.01 ± 1.04 <sup>u-y</sup>	3.26 ± 0.58 <sup>n-s</sup>	68.24 ± 0.43 <sup>l-o</sup>
		70	10.39 ± 0.50 <sup>j-p</sup>	5.44 ± 0.78 <sup>d-k</sup>	71.83 ± 1.55 <sup>kl</sup>
	30	30	7.08 ± 0.06 <sup>s-w</sup>	2.40 ± 0.35 <sup>q-v</sup>	20.03 ± 2.90 <sup>v</sup>
		50	8.08 ± 0.16 <sup>q-u</sup>	4.01 ± 0.02 <sup>k-p</sup>	65.13 ± 2.04 <sup>nop</sup>
		70	9.64 ± 0.12 <sup>l-q</sup>	6.16 ± 0.11 <sup>b-g</sup>	84.79 ± 1.02 <sup>ef</sup>
	50	30	7.75 ± 0.00 <sup>q-v</sup>	3.96 ± 0.34 <sup>l-p</sup>	70.39 ± 0.25 <sup>klm</sup>
		50	14.13 ± 0.66 <sup>c-g</sup>	6.90 ± 0.26 <sup>abc</sup>	70.22 ± 0.55 <sup>klm</sup>
		70	12.17 ± 0.19 <sup>f-k</sup>	6.88 ± 0.17 <sup>abc</sup>	76.85 ± 0.61 <sup>hi</sup>
ChCl-BDO	10	30	1.46 ± 0.20 <sup>CD</sup>	0.21 ± 0.01 <sup>y</sup>	19.90 ± 1.52 <sup>v</sup>
		50	7.93 ± 1.43 <sup>q-v</sup>	3.84 ± 0.75 <sup>l-p</sup>	63.62 ± 0.20 <sup>op</sup>
		70	13.40 ± 0.31 <sup>c-h</sup>	7.64 ± 0.21 <sup>a</sup>	90.85 ± 0.46 <sup>ab</sup>
	30	30	3.64 ± 0.04 <sup>z-C</sup>	1.19 ± 0.14 <sup>u-y</sup>	37.59 ± 0.30 <sup>t</sup>
		50	11.60 ± 0.07 <sup>h-m</sup>	5.72 ± 0.09 <sup>c-i</sup>	37.59 ± 2.06 <sup>t</sup>
		70	11.83 ± 0.36 <sup>h-l</sup>	6.61 ± 0.05 <sup>a-e</sup>	87.20 ± 0.67 <sup>b-f</sup>

		30	$5.21 \pm 0.15^{\text{w-A}}$	$2.23 \pm 0.05^{\text{s-w}}$	$66.47 \pm 0.12^{\text{m-p}}$
50		50	$12.75 \pm 0.72^{\text{e-i}}$	$6.17 \pm 0.29^{\text{b-g}}$	$89.41 \pm 0.42^{\text{a-e}}$
		70	$12.72 \pm 0.51^{\text{e-i}}$	$7.72 \pm 0.06^{\text{a}}$	$85.83 \pm 0.17^{\text{c-f}}$
		30	$3.22 \pm 0.19^{\text{A-D}}$	$1.94 \pm 0.10^{\text{s-x}}$	$49.51 \pm 0.91^{\text{r}}$
10		50	$13.32 \pm 0.13^{\text{c-h}}$	$3.69 \pm 1.19^{\text{m-r}}$	$86.43 \pm 3.57^{\text{b-f}}$
		70	$14.45 \pm 1.17^{\text{b-e}}$	$7.38 \pm 0.57^{\text{ab}}$	$82.75 \pm 1.43^{\text{fg}}$
		30	$8.30 \pm 1.33^{\text{o-t}}$	$2.59 \pm 0.59^{\text{p-u}}$	$62.41 \pm 1.58^{\text{p}}$
ChCL-Lac	30	50	$14.47 \pm 1.20^{\text{b-e}}$	$4.70 \pm 0.53^{\text{h-m}}$	$55.21 \pm 1.27^{\text{q}}$
		70	$17.29 \pm 0.64^{\text{a}}$	$7.83 \pm 0.02^{\text{a}}$	$76.75 \pm 1.55^{\text{hi}}$
		30	$12.88 \pm 0.37^{\text{d-i}}$	$4.90 \pm 0.41^{\text{g-m}}$	$68.91 \pm 0.41^{\text{lmm}}$
50		50	$14.36 \pm 1.36^{\text{c-f}}$	$4.66 \pm 0.59^{\text{h-n}}$	$83.25 \pm 3.25^{\text{f}}$
		70	$16.65 \pm 0.53^{\text{ab}}$	$5.76 \pm 0.24^{\text{c-h}}$	$66.33 \pm 0.56^{\text{m-p}}$
		30	$9.27 \pm 1.87^{\text{n-s}}$	$4.27 \pm 1.11^{\text{j-n}}$	$34.07 \pm 0.24^{\text{t}}$
10		50	$12.53 \pm 0.60^{\text{e-j}}$	$6.58 \pm 0.07^{\text{a-f}}$	$46.24 \pm 0.91^{\text{rs}}$
		70	$15.10 \pm 0.20^{\text{a-d}}$	$4.84 \pm 0.37^{\text{g-m}}$	$62.22 \pm 0.84^{\text{p}}$
		30	$11.99 \pm 0.05^{\text{g-k}}$	$4.30 \pm 0.28^{\text{i-n}}$	$46.90 \pm 2.76^{\text{rs}}$
ChCL-LeA	30	50	$16.69 \pm 1.00^{\text{ab}}$	$6.17 \pm 0.17^{\text{b-g}}$	$94.00 \pm 0.25^{\text{a}}$
		70	$15.04 \pm 0.78^{\text{a-d}}$	$5.16 \pm 0.21^{\text{f-l}}$	$76.43 \pm 0.23^{\text{hij}}$
		30	$14.35 \pm 0.70^{\text{c-f}}$	$4.94 \pm 0.50^{\text{g-m}}$	$47.47 \pm 3.80^{\text{rs}}$
50		50	$16.73 \pm 1.08^{\text{a}}$	$5.70 \pm 0.63^{\text{c-j}}$	$62.24 \pm 1.51^{\text{p}}$
		70	$15.46 \pm 0.61^{\text{abc}}$	$5.23 \pm 0.32^{\text{e-l}}$	$74.17 \pm 0.53^{\text{h-k}}$
		30	$5.16 \pm 0.29^{\text{w-A}}$	$2.30 \pm 0.56^{\text{r-w}}$	$66.57 \pm 0.31^{\text{m-p}}$
Water		50	$4.75 \pm 0.28^{\text{x-B}}$	$2.61 \pm 0.25^{\text{o-u}}$	$68.51 \pm 0.42^{\text{lmm}}$
		70	$6.72 \pm 0.29^{\text{t-x}}$	$3.81 \pm 0.54^{\text{l-q}}$	$75.85 \pm 0.31^{\text{hij}}$
		30	$6.95 \pm 0.07^{\text{t-x}}$	$2.74 \pm 0.02^{\text{o-t}}$	$85.52 \pm 0.00^{\text{def}}$
30 % EtOH (v/v)		50	$9.96 \pm 0.01^{\text{k-q}}$	$4.03 \pm 0.05^{\text{k-o}}$	$90.45 \pm 0.33^{\text{abc}}$
		70	$8.16 \pm 0.12^{\text{p-u}}$	$4.90 \pm 0.07^{\text{g-m}}$	$72.64 \pm 0.39^{\text{i-l}}$
50 % EtOH (v/v)		30	$6.57 \pm 0.35^{\text{t-y}}$	$2.17 \pm 0.12^{\text{s-w}}$	$73.90 \pm 0.54^{\text{h-k}}$

	50	$9.30 \pm 0.13^{\text{n-s}}$	$5.84 \pm 0.06^{\text{c-h}}$	$89.70 \pm 0.18^{\text{a-d}}$
	70	$10.45 \pm 0.13^{\text{i-o}}$	$7.44 \pm 0.03^{\text{ab}}$	$90.86 \pm 0.29^{\text{ab}}$
	30	$3.09 \pm 0.06^{\text{A-D}}$	$1.10 \pm 0.05^{\text{v-y}}$	$43.17 \pm 0.62^{\text{s}}$
70 % EtOH (v/v)	50	$5.78 \pm 0.44^{\text{v-z}}$	$2.65 \pm 0.20^{\text{o-t}}$	$65.57 \pm 0.06^{\text{m-p}}$
	70	$6.67 \pm 0.18^{\text{t-y}}$	$3.94 \pm 0.12^{\text{l-p}}$	$74.44 \pm 0.48^{\text{h-k}}$
MeOH	30	$1.18 \pm 0.04^{\text{D}}$	$0.33 \pm 0.01^{\text{y}}$	$26.68 \pm 1.00^{\text{u}}$
	50	$1.56 \pm 0.14^{\text{CD}}$	$0.53 \pm 0.05^{\text{xy}}$	$33.38 \pm 0.06^{\text{t}}$
	70	$1.88 \pm 0.16^{\text{CD}}$	$0.38 \pm 0.04^{\text{y}}$	$33.79 \pm 1.04^{\text{t}}$

Results are expressed as mean value±standard deviation (N = 3). Different letters within a column indicate a significant difference based on Tukey's HSD test at  $p < 0.05$ .