pharmaceutics

Supplementary Materials: Increased Water-Solubility and Maintained Antioxidant Power of Resveratrol by Its Encapsulation in Vitamin E TPGS Micelles: A Potential Nutritional Supplement for Chronic Liver Disease

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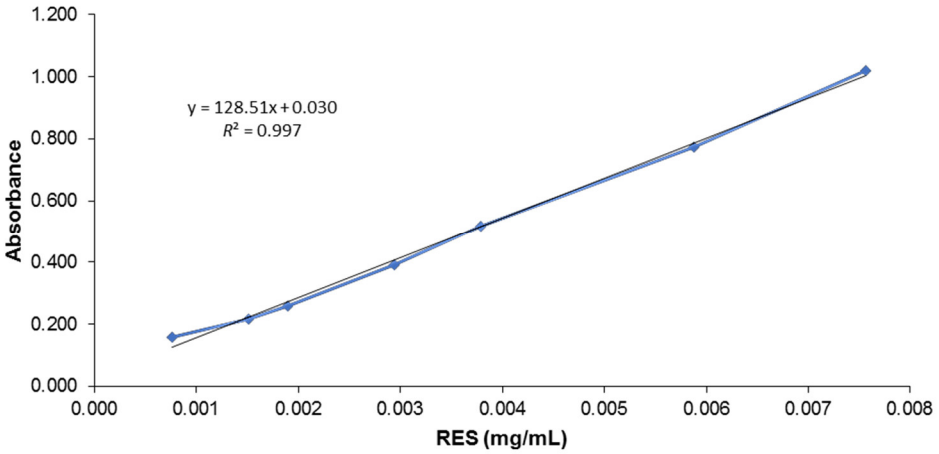

Figure S1. RES calibration curve in methanol at λ_{max} = 306 nm using an UV-Vis spectrophotometer within a range 3.33–331.70 μM.

Results

		Size (d.nm...	% Intensity	Width (d.n...
Z-Average (d.nm): 11,88	Peak 1:	12,94	100,0	3,892
PdI: 0,148	Peak 2:	0,000	0,0	0,000
Intercept: 0,940	Peak 3:	0,000	0,0	0,000

Result quality Good

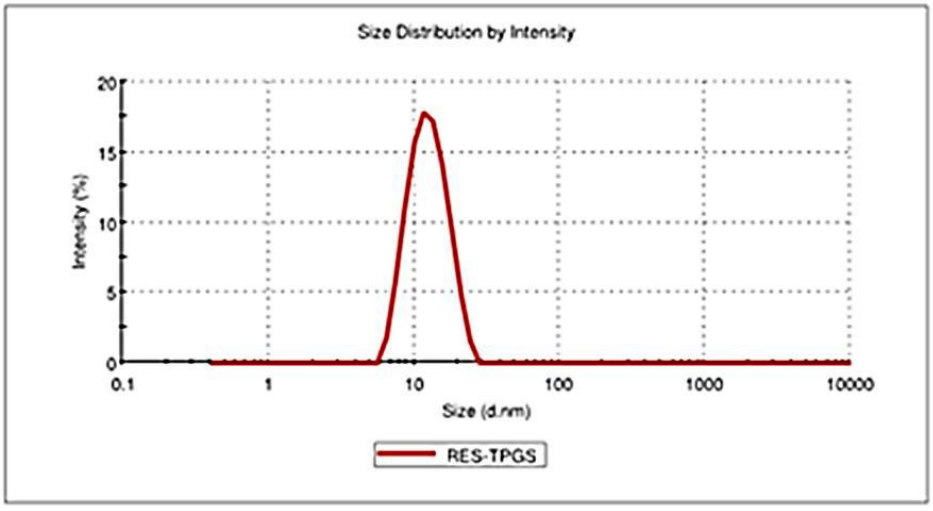

Figure S2. Representative size distribution of freshly prepared RES-TPGS colloidal dispersion.

Results

		Size (d.nm...	% Intensity	Width (d.n...
Z-Average (d.nm): 11,03	Peak 1:	12,13	100,0	3,273
PdI: 0,110	Peak 2:	0,000	0,0	0,000
Intercept: 0,940	Peak 3:	0,000	0,0	0,000

Result quality Good

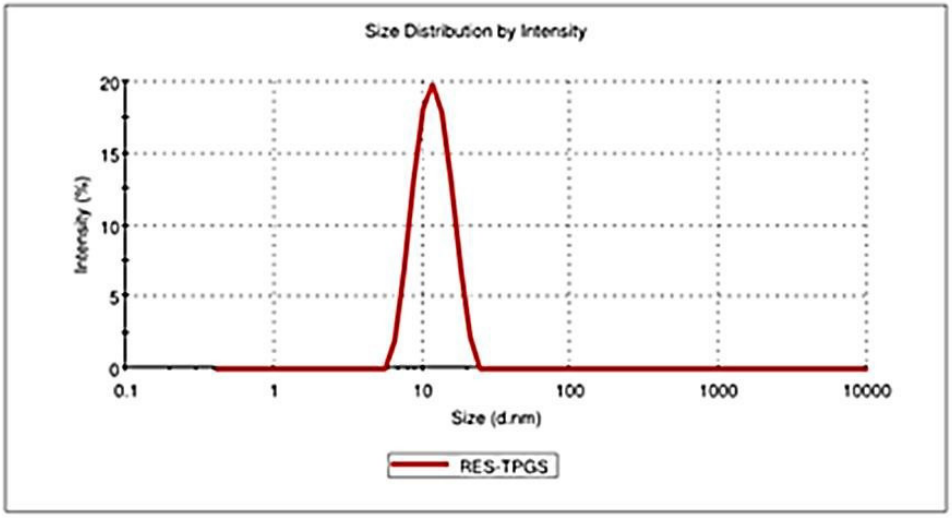

Figure S3. Representative size distribution of a RES-TPGS formulation reconstituted in water to its original volume from lyophilized powder.

Results

		Mean (mV)	Area (%)	Width (mV)
Zeta Potential (mV): -4,75	Peak 1:	-4,75	100,0	3,04
Zeta Deviation (mV): 3,04	Peak 2:	0,00	0,0	0,00
Conductivity (mS/cm): 0,00600	Peak 3:	0,00	0,0	0,00

Result quality Good

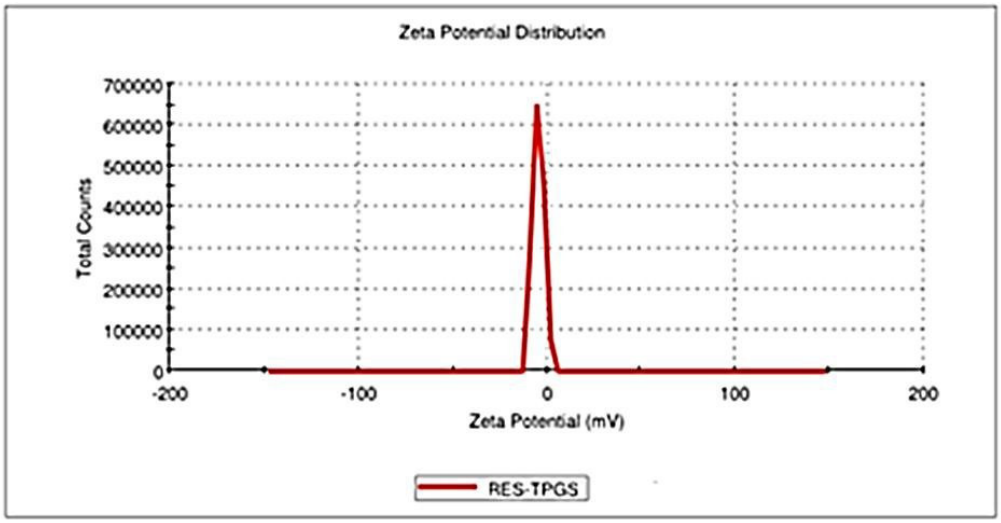

Figure S4. Representative distribution of the Z potentials of a RES-TPGS formulation measured in water.

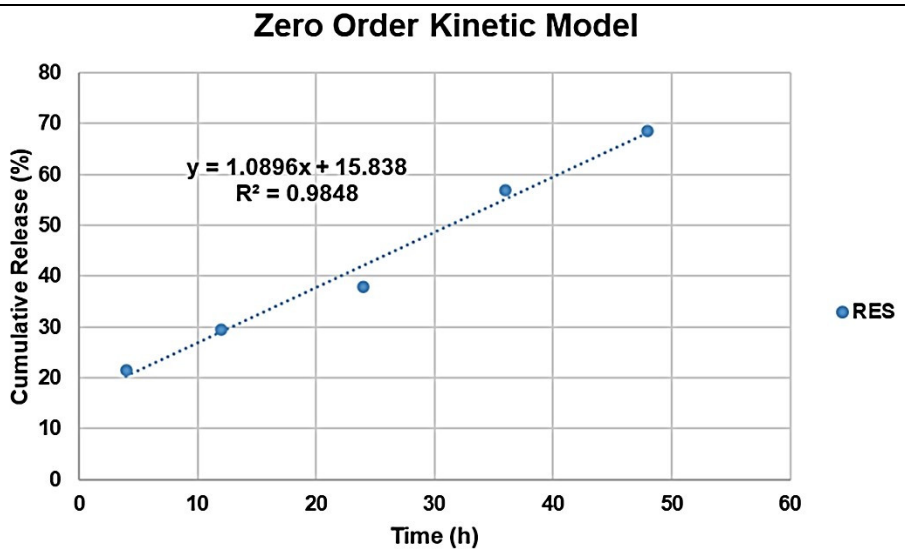

Figure S5. Zero order kinetic mathematical model.

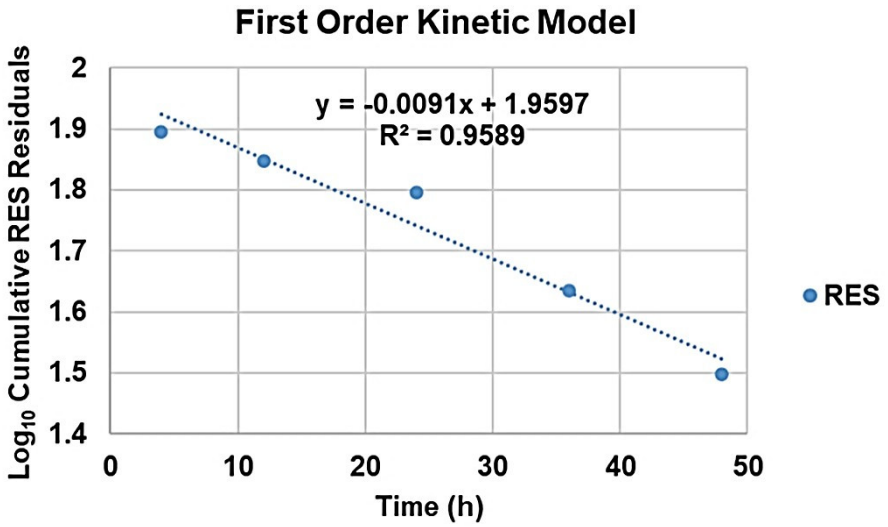

Figure S6. First order kinetic mathematical model.

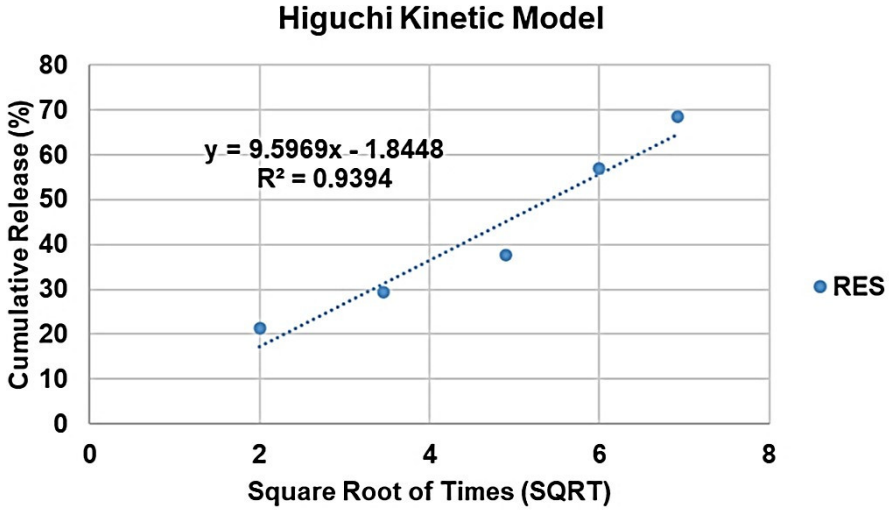

Figure S7. Higuchi kinetic mathematical model.

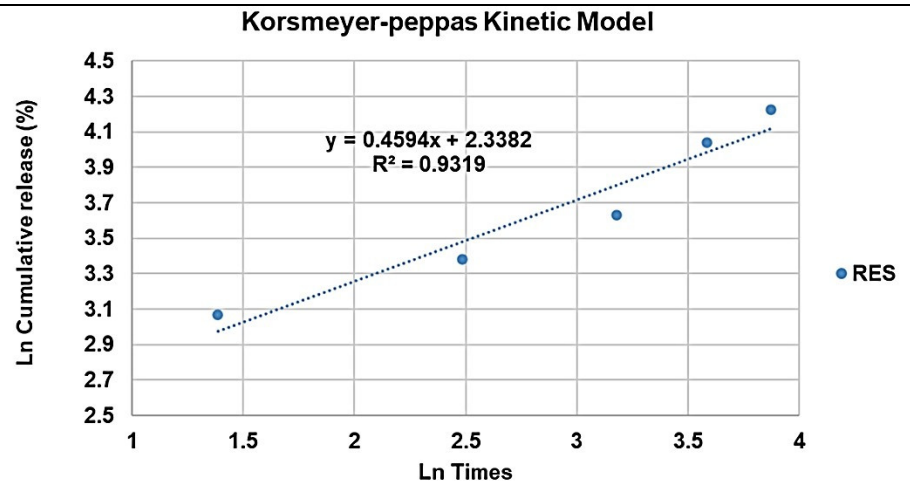

Figure S8. Korsmayer-Peppas kinetic mathematical model.

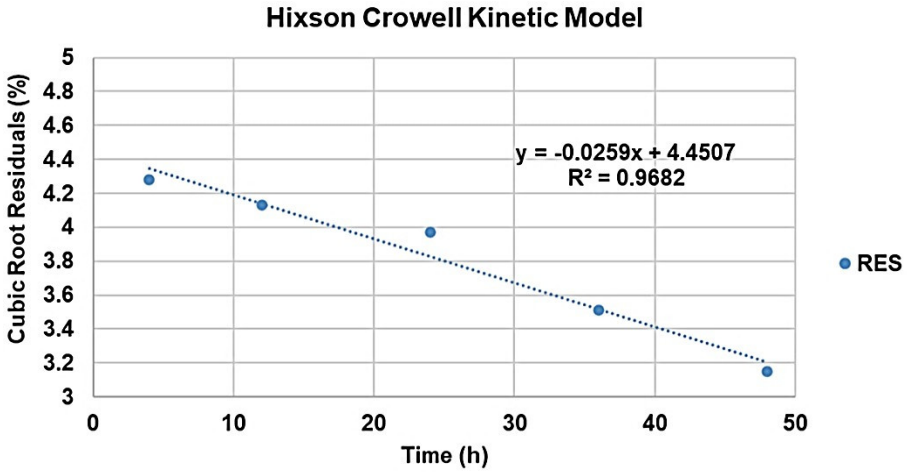

Figure S9. Hixson Crowel kinetic mathematical model.

Table S1. Particle size ratio (*Sl*/*Sf*) of the loaded formulations after recostitution compared with those after fresh preparation.

TPGS Concentration (mg/mL)	*Sl*/*Sf* ratio [1]
2	1.0± 0.4
4	1.0± 0.2
6	1.2±0.1
8	1.3±0.4
10	1.1±0.2
12	1.1±0.1
14	1.2±0.3

[1] Mean ± S.D. (*n*=3).