

# Nano-lipids based on ginger oil and lecithin as a potential drug delivery system

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## Supporting material

Table S1: Compounds identified by GC–MS using NIST-14 Mass Spectral library

Figure S1: Full GC spectrum of ginger oil.

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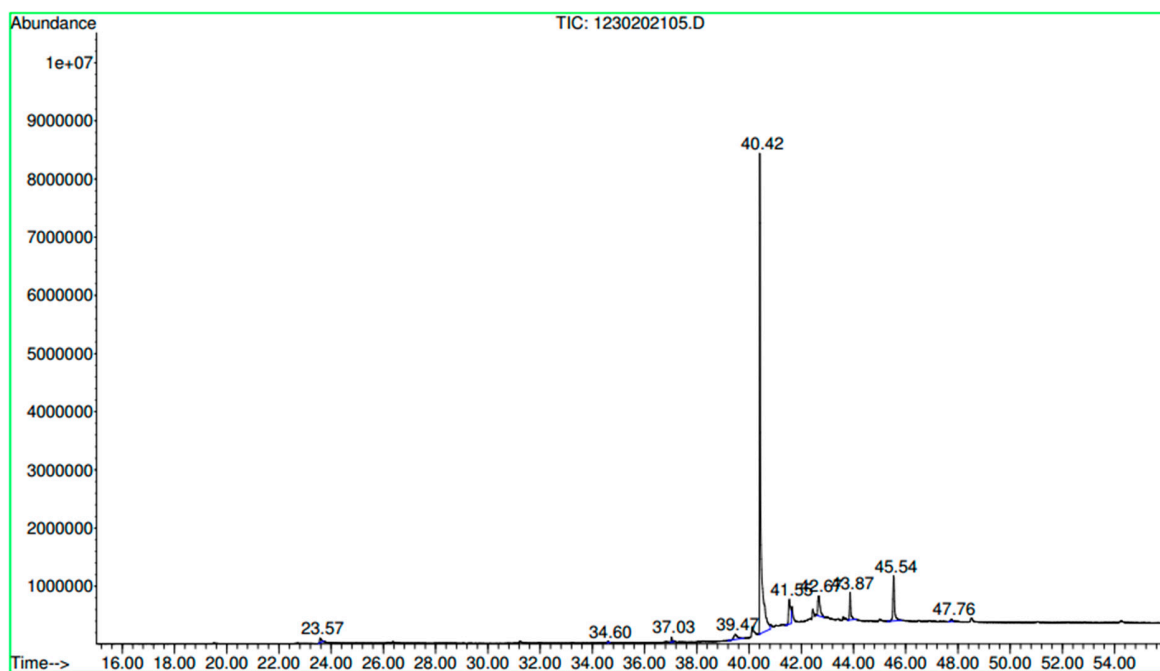
Figure S9: Hydrodynamic size value of Cur@ GL in PBS buffer and the EE values after 10 days stored at 25°C.

Figure S10: Release kinetics of Cur@ GL at pH 7.4 (A) and at pH 5.5 (B) fitted to 5 kinetic models constructing by KinetDS

**Table S1: Compounds identified by GC–MS using NIST-14 Mass Spectral library**

Peak	R.T.	Name of compound	Pct Total
1	23.584	Geraniol	1.949
2	37.032	n.i	0.474
3	39.479	n.i	1.378
4	40.138	n.i	3.113
5	40.41	(6)-Shogaol	63.137
6	41.549	[8]-Shogaol	6.29
7	41.644	n.i	5.09
8	42.449	n.i	1.438
9	42.679	n.i	5.671
10	43.871	Geranyl oleate	3.735
11	45.544	[6]-Gingerdiol (2E)-geranial acetal	7.726

**Figure list**



**Figure S1: Full GC spectrum of ginger oil**

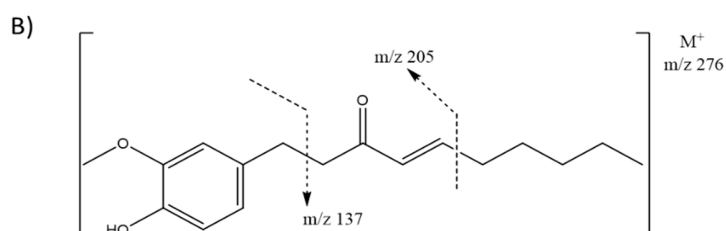
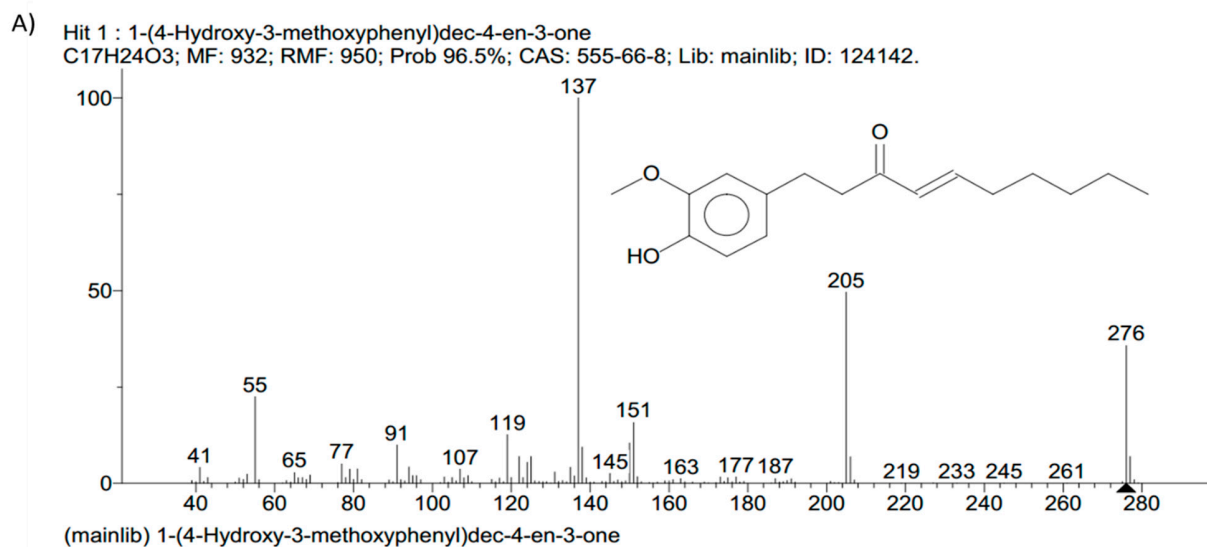


Figure S2: Mass spectrum extracted from a peak 40.41 (A) and its fragmentation (B)

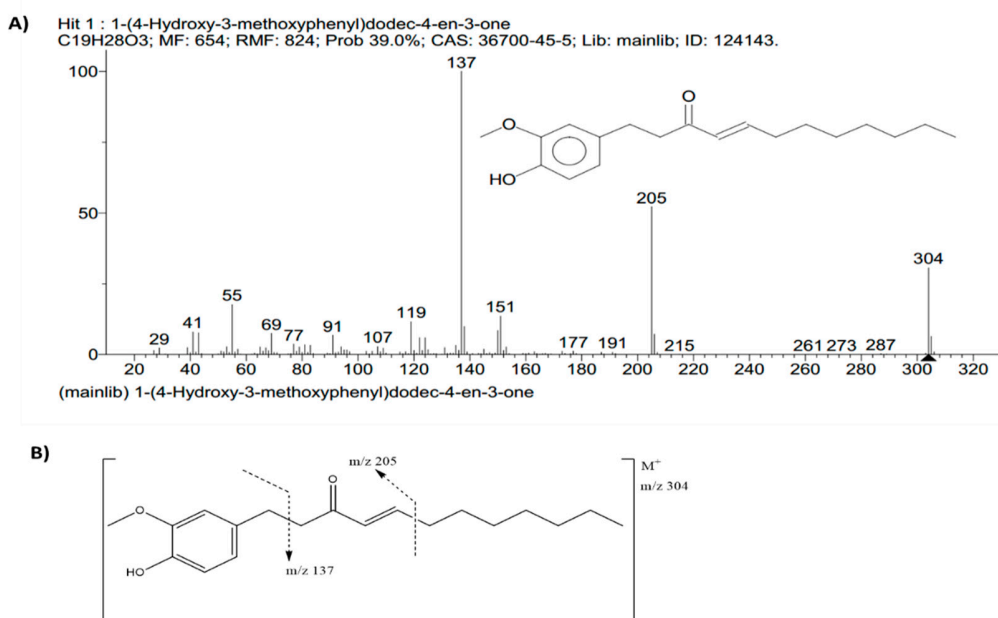


Figure S3: Mass spectrum extracted from a peak 41.45(A) and its fragmentation (B)

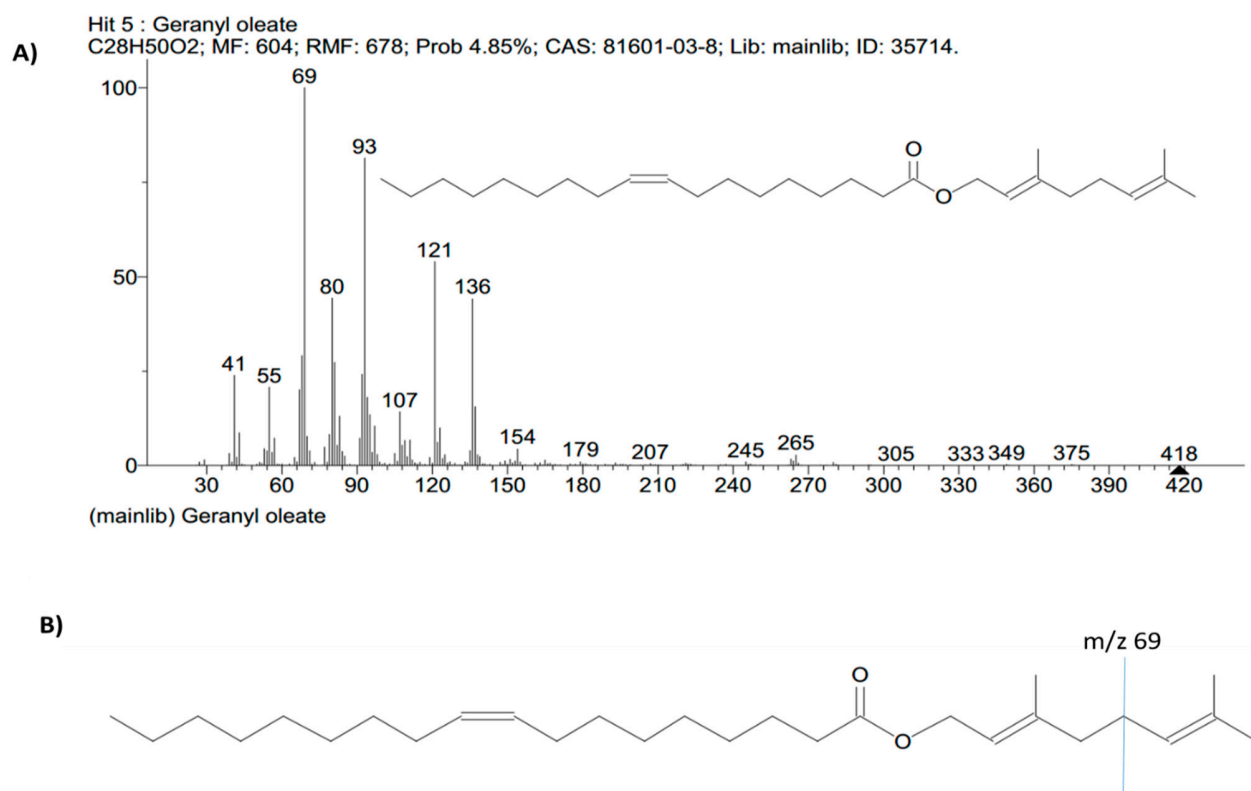


Figure S4: Mass spectrum extracted from a peak 43.88 (A) and its fragmentation (B)

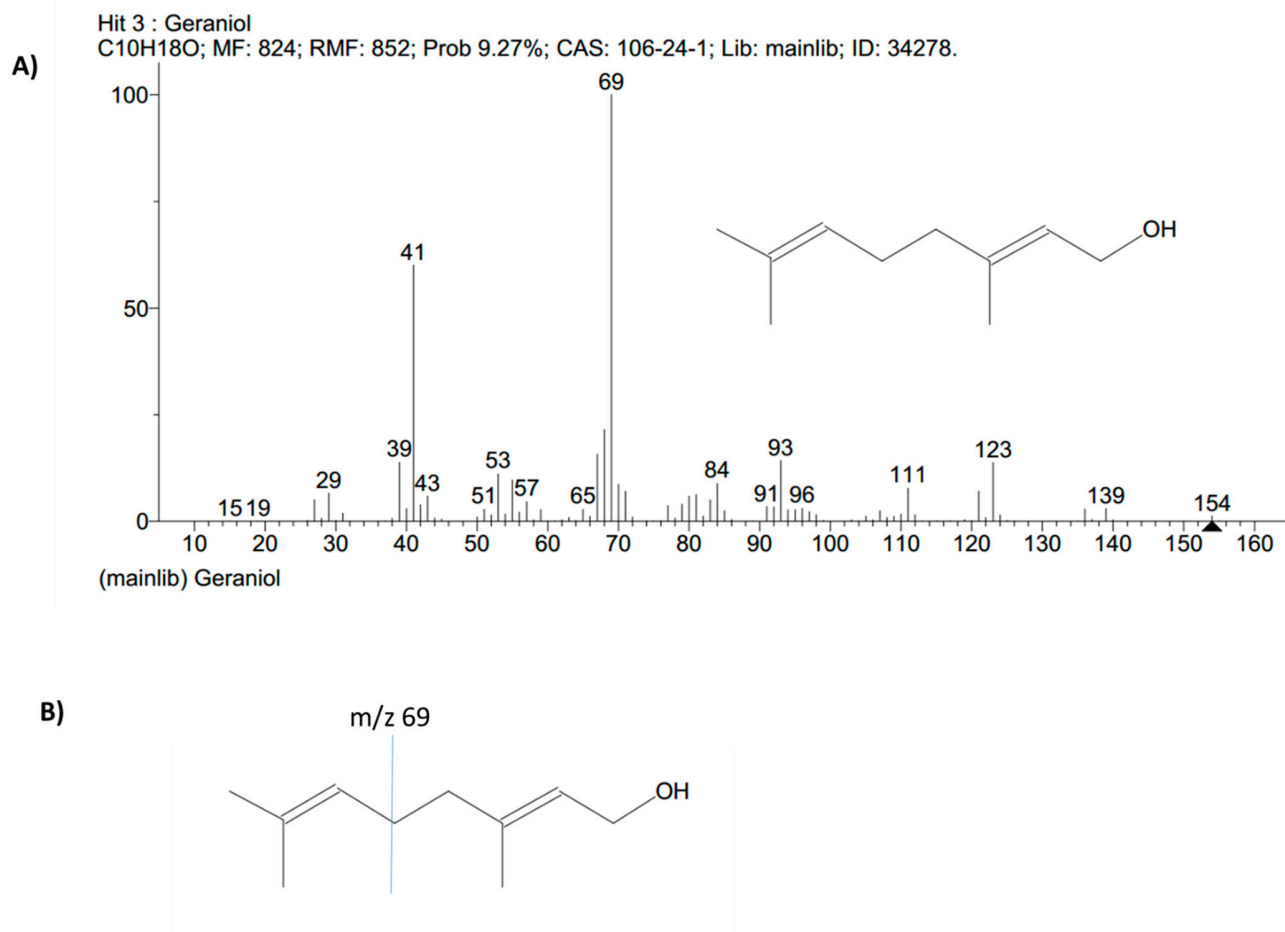


Figure S5: Mass spectrum extracted from a peak 23.57 (A) and its fragmentation (B)

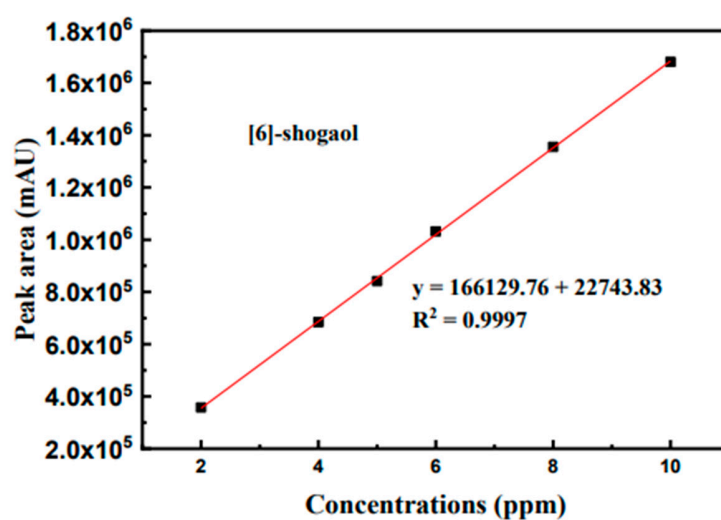


Figure S6: Standard curve of [6]-shogaol constructing by HPLC

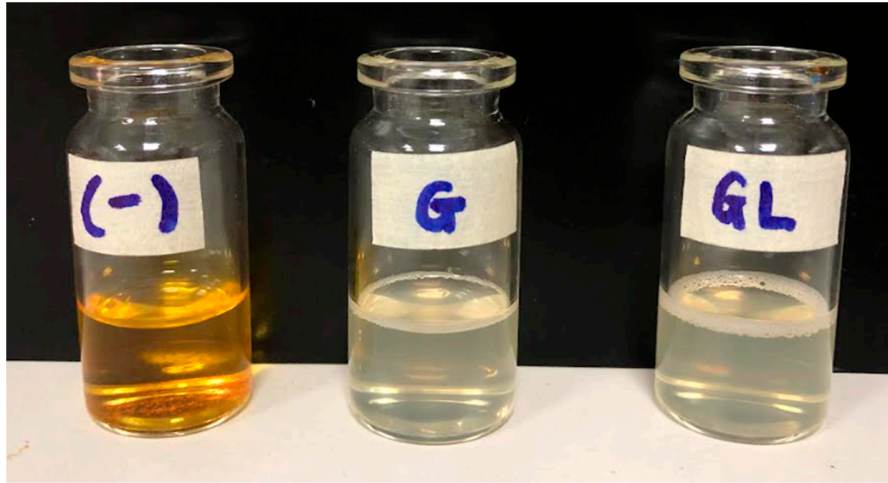


Figure S7: The color of pyrogallol solution in the presentation of HEPES buffer, Ginger oil and GL nano-lipid

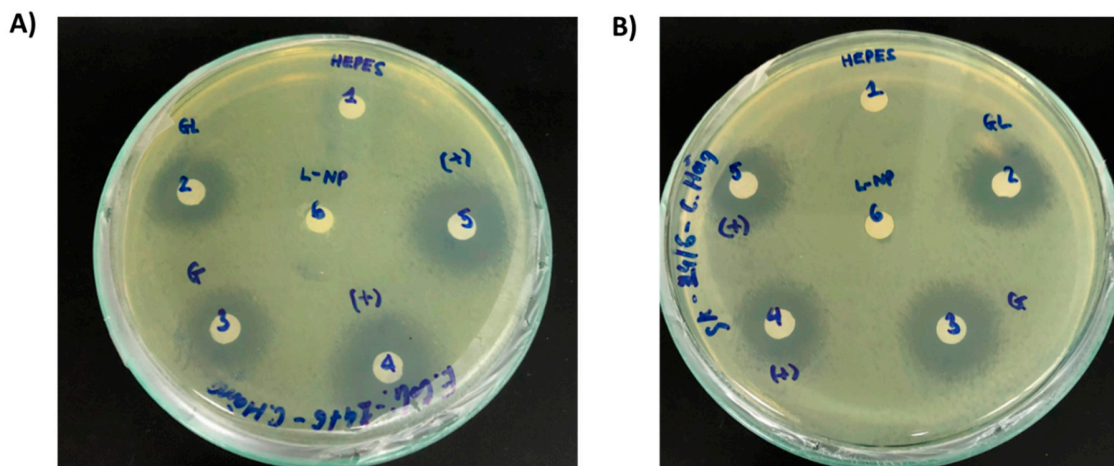


Figure S8: Zones of Inhibitions formed on nutrient agar surface by Hepes (1) GL nano-lipid (2), ginger oil (3), and two positive controls (Ampicillin (4) and Streptomycin(5)) L nano-lipid (6) against *E.coli* (A) and *S.aureus* (B).

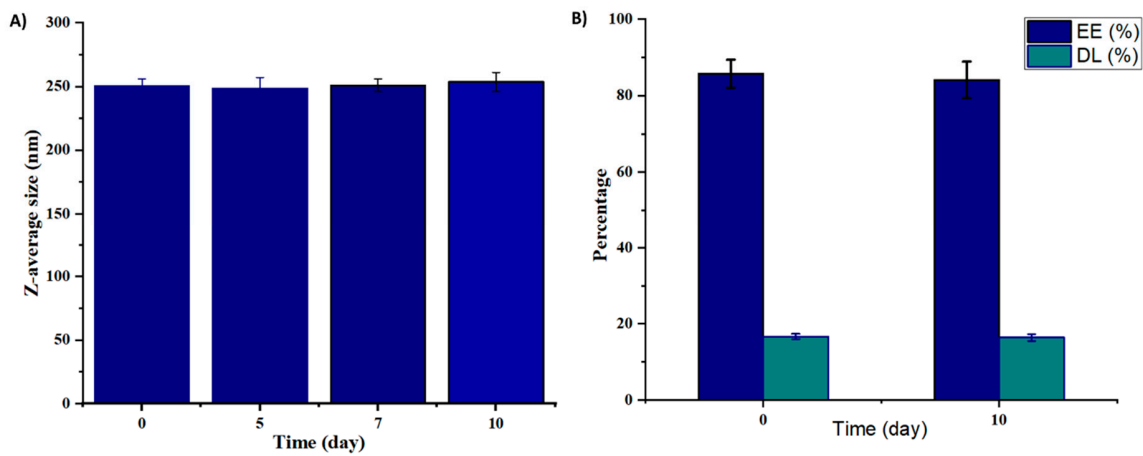
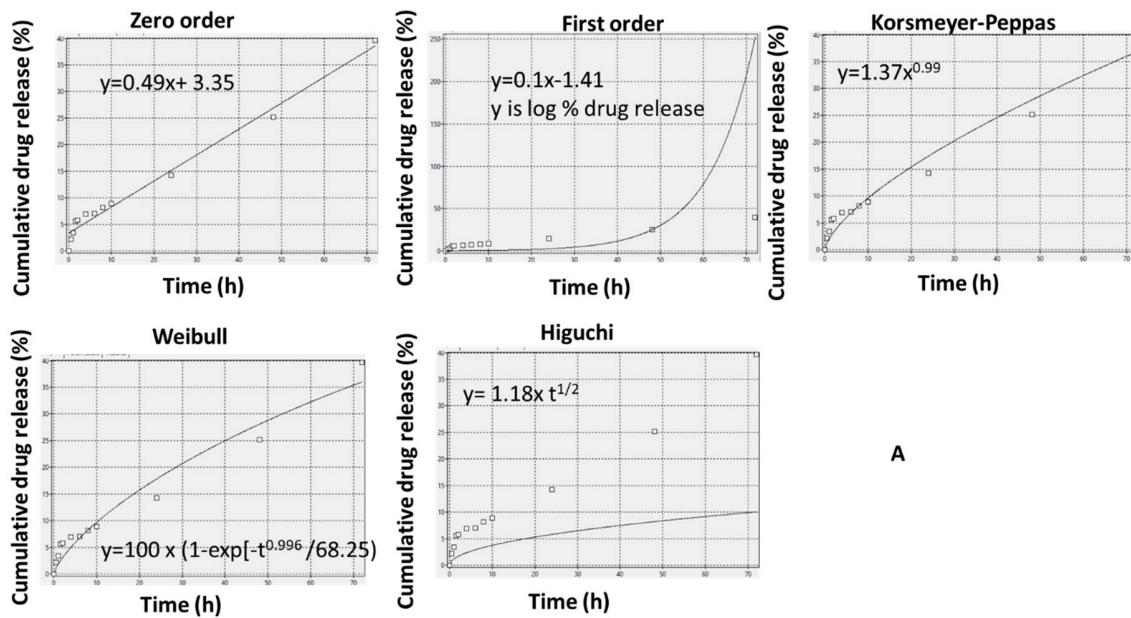


Figure S9: Hydrodynamic size value of Cur@ GL in PBS buffer (A) and the EE and DL values (B) after 10 days stored at 25°C.



A

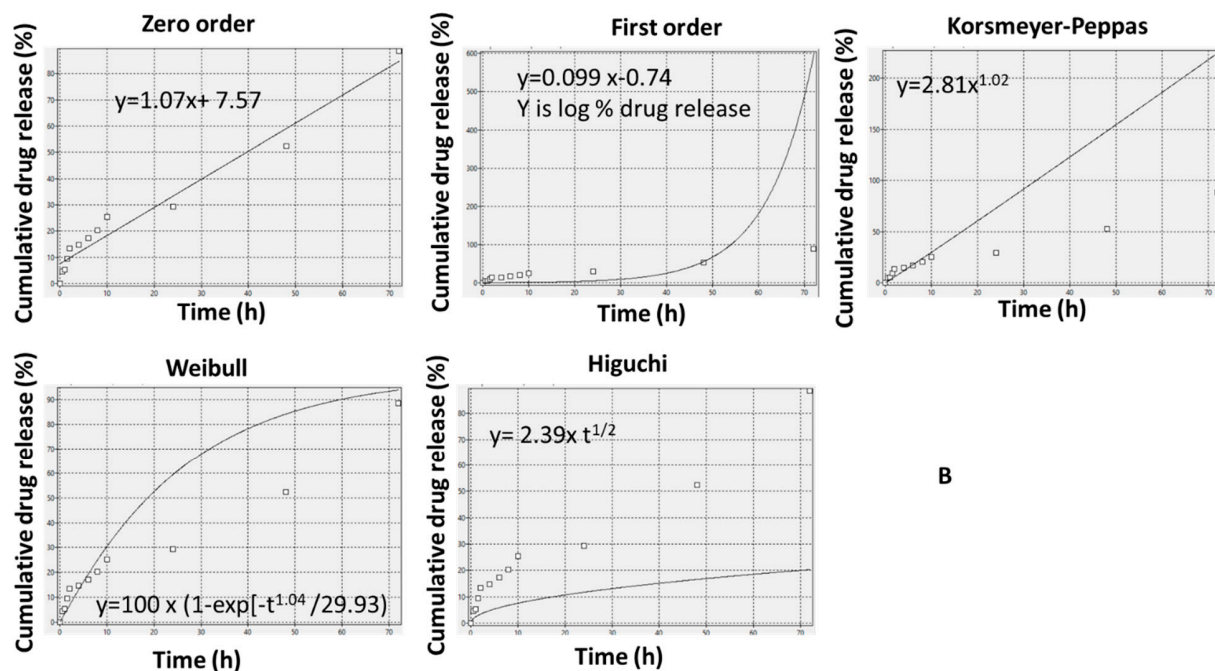


Figure S10: Release kinetics of Cur@ GL at pH 7.4 (A) and at pH 5.5 (B) fitted to 5 kinetic models constructing by KinetDS