

Figure S1. Viscosity curves of (a) oil-in-water NEs and (b) hydrogels with and without KRG extract at a shear rate of 1 - 100 s⁻¹ measured after production (week 0 = after 24 hours, both in mPas using logarithmic scale). (a) grey circles: NE A, black circles: NE A_KRG, grey triangles: NE B, black triangles: NE B_KRG. (b) grey squares: gel H, black squares: gel H_KRG, grey triangles: gel R, black triangles: gel R_KRG, grey circles: gel E, black circles: gel E_KRG. Values are means \pm SD of n=3 formulations analysed at room temperature (23°C).

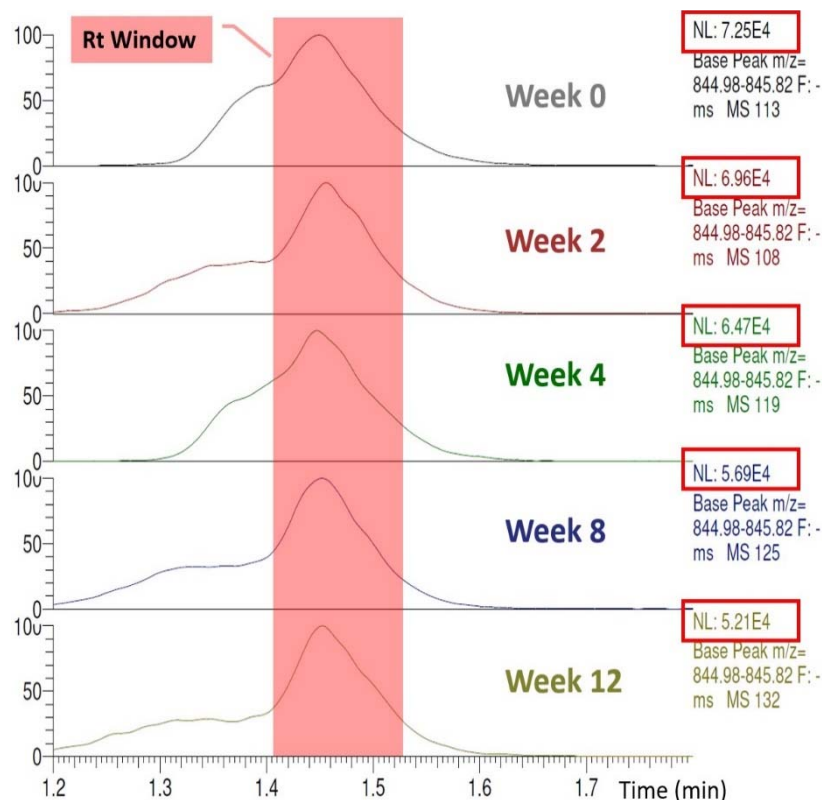


Figure S2. Dynamic degradation of ginsenoside Rg1 as assessed by UHPLC/MS, shown in an exemplary manner for formulation NE A₁. The retention time (x-axis) as used by the alignment and integration algorithm is marked with a red overlay. The relative intensity normalized to the maximum intensity (NL value, red rectangle) of total ion current in mass spectrometry is depicted on the y-axis.

Table S1. Effect of KRG extract on formulation properties (2 NE types, 3 hydrogel types) after production. Shown parameters for NEs are mean hydrodynamic diameter in nm, polydispersity index (PDI), zeta potential (ZP) in mV, pH and dynamic viscosity η in Pa·s at a shear rate of 10 s⁻¹. For hydrogels, parameters of interest are pH and dynamic viscosity η in Pa·s at a shear rate of 10 s⁻¹. Values are means \pm SD of n=3 formulations.

	d [nm]	PDI	ZP [mV]	pH	η [Pa·s] at 10/s
NE A	137.71 \pm 4.82	0.110 \pm 0.001	-50.28 \pm 3.50	6.70 \pm 0.01	2.73 \pm 0.06
NE A_KRG	132.03 \pm 4.45	0.105 \pm 0.007	-45.13 \pm 2.91	5.69 \pm 0.01	2.70 \pm 0.15
NE B	100.52 \pm 4.64	0.091 \pm 0.010	-56.12 \pm 1.74	6.70 \pm 0.02	3.25 \pm 0.06
NE B_KRG	97.49 \pm 2.65	0.095 \pm 0.014	-45.19 \pm 1.50	5.64 \pm 0.06	3.20 \pm 0.04
Gel H				5.30 \pm 0.03	24761 \pm 757
Gel H_KRG				5.09 \pm 0.07	6343 \pm 542
Gel R				6.55 \pm 0.08	27676 \pm 454
Gel R_KRG				6.26 \pm 0.06	13136 \pm 92
Gel E				7.60 \pm 0.04	103436 \pm 3966
Gel E_KRG				5.92 \pm 0.07	111880 \pm 3578