

Supplementary Material: Lipid Nanoparticles Containing Mixtures of Antioxidants to Improve Skin Care and Cancer Prevention

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Table S1. Solid lipid Screening.

Solid lipid	Naringenin					NDGA					Kaempferol				
	Ratio (w/w)	Time (min)				Ratio (w/w)	Time (min)				Ratio (w/w)	Time (min)			
		15	30	45	60		15	30	45	60		15	30	45	60
Gelucire® 50/13	1:100	-	-	-	-	1:100	-	-	-	-	1:100	+	-	-	-
Softisan® 100	1:100	+	-	-	-	1:100	+	+	-	-	1:100	+	+	+	+
Com-pritol® H105 ATO	1:100	-	-	-	-	1:100	+	-	-	-	1:100	+	+	+	+
Apifil®	1:100	+	-	-	-	1:100	-	-	-	-	1:100	-	-	-	-
Precirol® 5 ATO	1:200	-	-	-	-	1:100	-	-	-	-	1:100	+	+	+	+
Witepsol® E76	1:200	+	-	-	-	1:100	+	+	+	+					
Suppocire DM Pel-lets	1:200	+	+	-	-	1:100	+	+	+	+					
Suppocire NA15 pel-lets	1:200	+	+	-	-	1:100	+	+	+	+					

Gelucire 39/01	1:200	+	+	-	-	1:100	+	+	+	+	
Gelucire® 43/01	1:200	+	+	-	-	1:100	+	+	+	+	
Cetyl palmitate	1:200	+	+	-	-	1:100	+	+	+	+	
Stearic acid	1:200	+	+	-	-	1:100	+	+	+	+	
Dynasan® 118	1:100	+	+	+	+						
Glyceryl monostearate	1:100	+	+	+	+						
Softisan® 154	1:200	+	+	+	+						

Table S2. Liquid lipid screening.

Solid lipid	Naringenin					NDGA					Kaempferol				
	Ratio (w/w)	Time (min)				Ratio (w/w)	Time (min)				Ratio (w/w)	Time (min)			
		15	30	45	60		15	30	45	60		15	30	45	60
Miglyol 812 (medium-chain triglycerides)	1:100	+	-	-	-	1:100	-	-	-	-	1:200	-	-	-	-
Labrafac WL1349 (medium-chain triglycerides)	1:100	+	-	-	-	1:100	-	-	-	-	1:200	-	-	-	-
Microcare (cetyl dimeticones)	1:100	+	+	-	-	1:100	+	+	+	+					
Isopropyl myristate	1:100	+	+	+	+										
Cetyl V (decyl oleate)	1:100	+	+	+	+										

Table S3. Solid and liquid lipid compatibility assay.

Solid lipid \ Liquid lipid	Miglyol® 812	Labrafac WL1349
Gelucire® 50/13	+	-
Apifil®	-	+

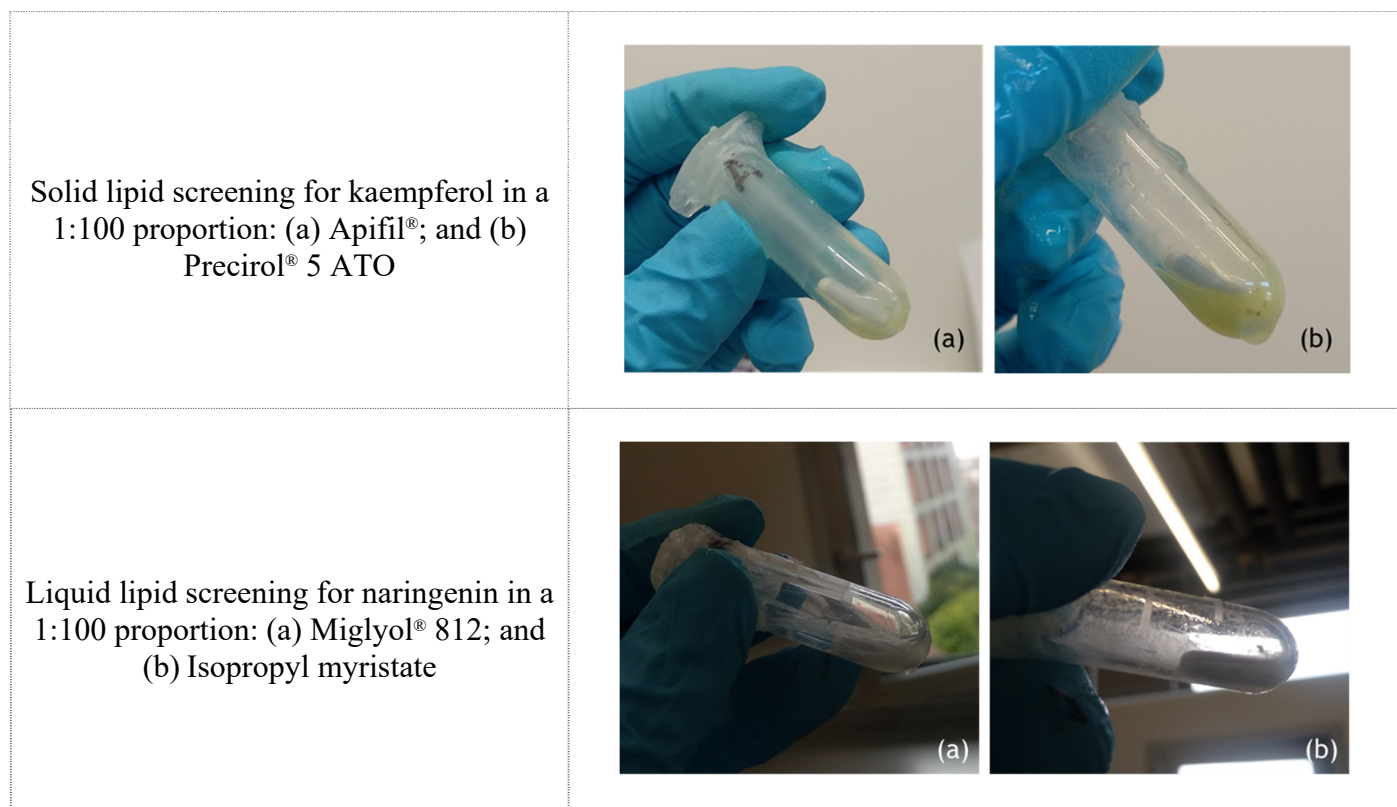


Figure S1. Examples of lipids that were able to solubilize the NC (a), while the (b) figures are representatives of the ones that could not solubilize the NC, since compound crystals can be visualized.

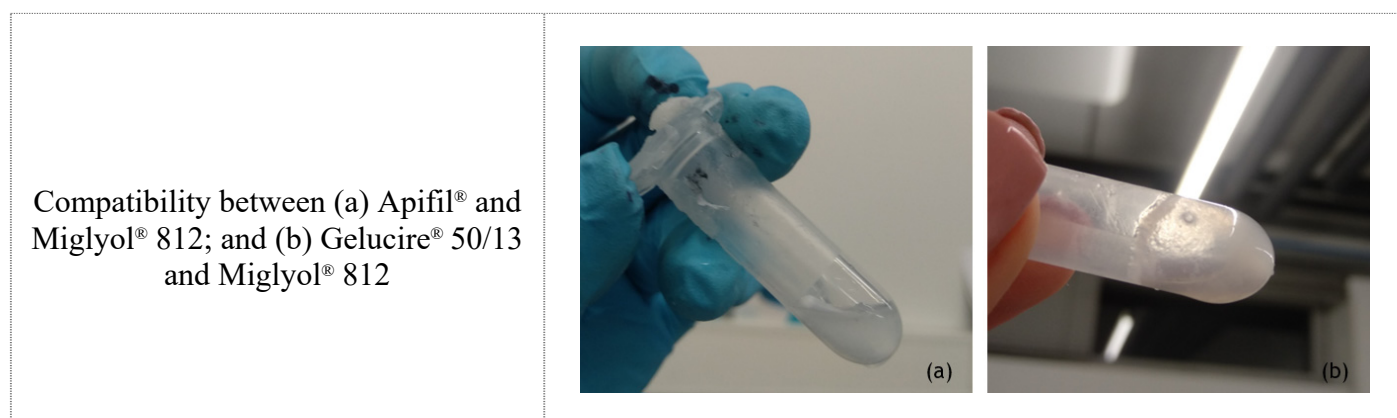


Figure S2. Compatibility evaluation between the solid and liquid lipids. The picture contains an example of the combination where the lipids were compatible (a) and where the solubilization did not occur (b).

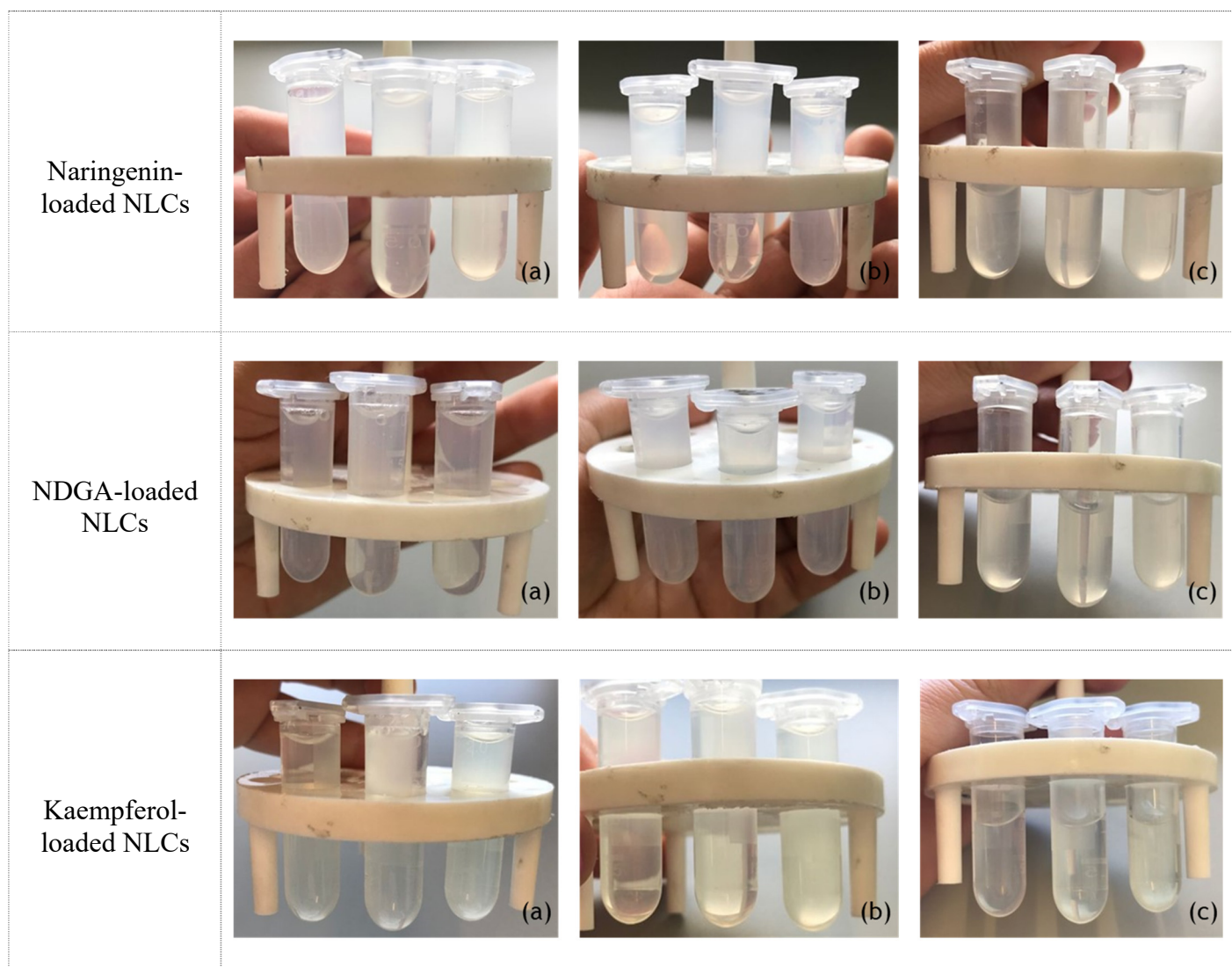


Figure S3. Images of the samples before and after the first and second centrifugation included in the accelerated stability study assays before centrifugation (a); after the first centrifugation (30 minutes) (b); and after the second centrifugation (30 minutes + 30 minutes) (c).