

SUPPLEMENTARY INFORMATION

Characterization of Tuna Gelatin-Based Hydrogels as a Matrix for Drug Delivery

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Table S1. The compilation of the major band assignments for Dry GE, 25GE, 25GE/Dox, and 25GE/Crocin at 25°C.

Wavenumber (cm ⁻¹)				Assignment
Dry GE	25 GE	25 GE/Dox	25 GE/Crocin	
3284	3330	3297	3297	N-H/O-H
2850-3000	2850-3000	-	-	Aliphatic bond stretching CH
1333, 1444	1338, 1462	-	-	Aliphatic bending CH
1631,1528,1238	1634,1557,1244	1637, 1555, 1247	1635, 1558, 1248	Amide I,II,III
975	-	973	-	CNC
528,612,700	532,607,704	-	-	Amide IV,V,VI
1164-1080	1165,1082,1032	1200-1011	1200-1028	Bond stretching C-O, C-O-C
600	600	652	654	Water
-	-	621	-	N-C=O

Table S2. Major band assignments for Dry GE, 25GE, 25GE/Dox, and 25GE/Crocin at 50°C.

Wavenumber (cm ⁻¹)				Assignment
Dry GE	25 GE	25 GE/Dox	25 GE/Crocin	
3284	3280	3285	3285	N-H/O-H
2850-3000	2850 - 3000	2890 - 3000	2890 - 3000	Aliphatic bond stretching CH
1334, 1447	1334, 1447	1300-1447	1335-1447	Aliphatic bending CH
1633, 1519, 1236	1627, 1530, 1239	1630, 1529, 1237	1630, 1529, 1237	Amide I,II,III
920	-	973	973	CNC
561, 660, 703	556, 657, 704	-	-	Amide IV,V,VI
1163, 1080, 1031	1164, 1080, 1032	1200-1031	-	Bond stretching C-O, C-O-C
600	600	652	-	Water
-	-	621	-	N-C=O
-	-	1730	-	C=O from Dox

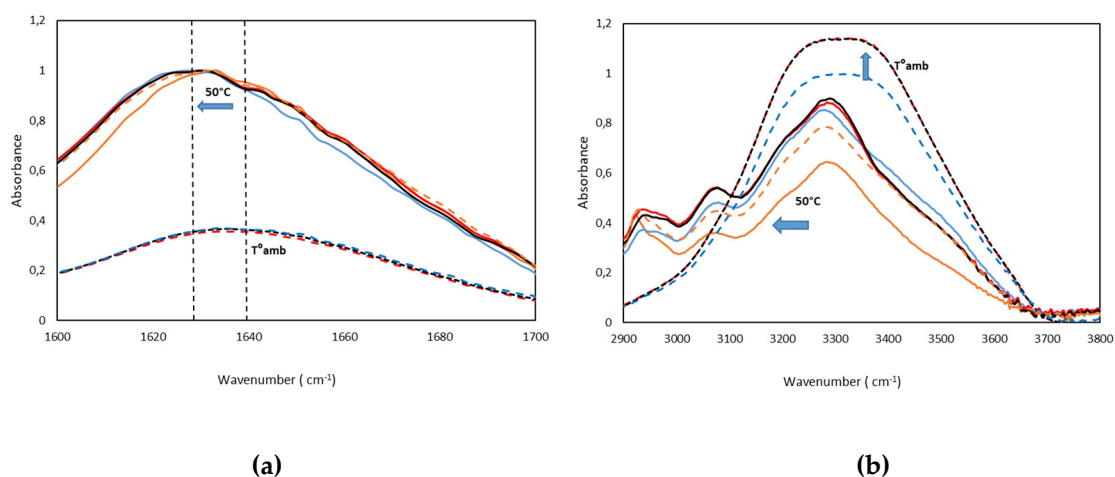


Figure S1. (a) Comparison of FTIR spectra at room temperature (dashed lines) and FTIR spectra at 50°C (solid lines) in the 1600-1700 cm^{-1} region, (b) Comparison of FTIR spectra at room temperature (dashed lines) and FTIR spectra at 50°C (solid lines) in the 2900-4000 cm^{-1} region, of (-) Dry GE, (-) 25GE, (-) 25GE/DOX and (-) 25GE/Crocin.

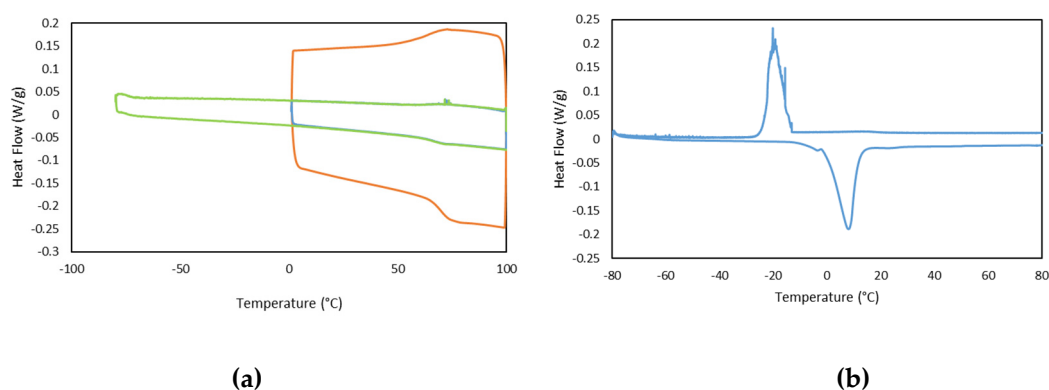
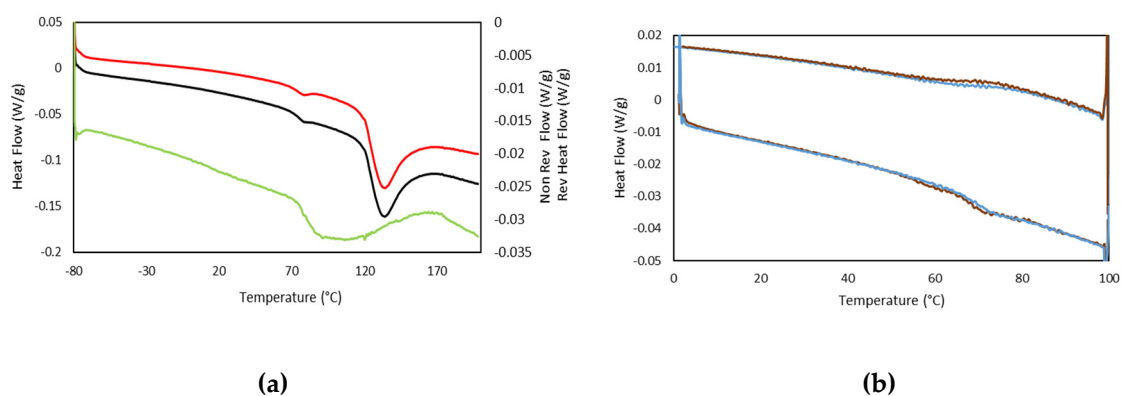
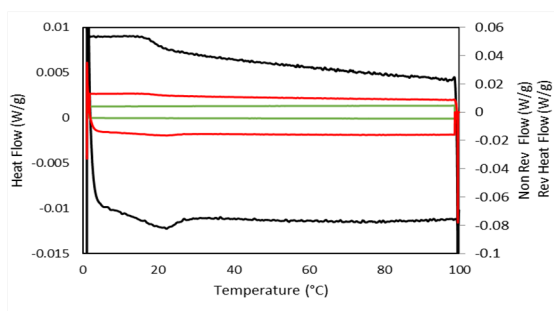
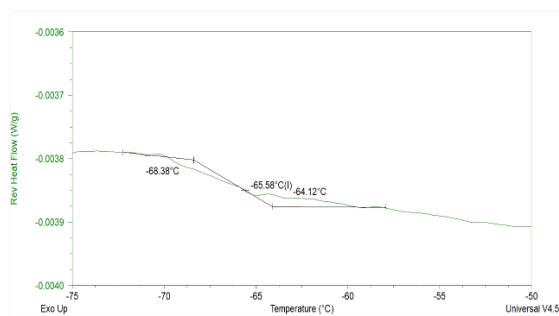


Figure S2. (a) DSC thermogram of Dry GE at 5°C·min $^{-1}$ (orange colour) and 1°C·min $^{-1}$ (green colour), (b) DSC thermogram of 25GE at 1°C·min $^{-1}$.





c)



d)

Figure S3. MDSC of (a) Dry GE in the Rev Heat Flow (green colour), Non Rev. Heat Flow (Black colour) and Heat Flow (red colour), (b) Dry GE at 1K/min (Two reps), (c) 25GE in the Rev Heat Flow (green colour), Non Rev. Heat Flow (Black colour) and Heat Flow (red colour), (d) MDSC of 25GE in the Reversing Heat Flow.