

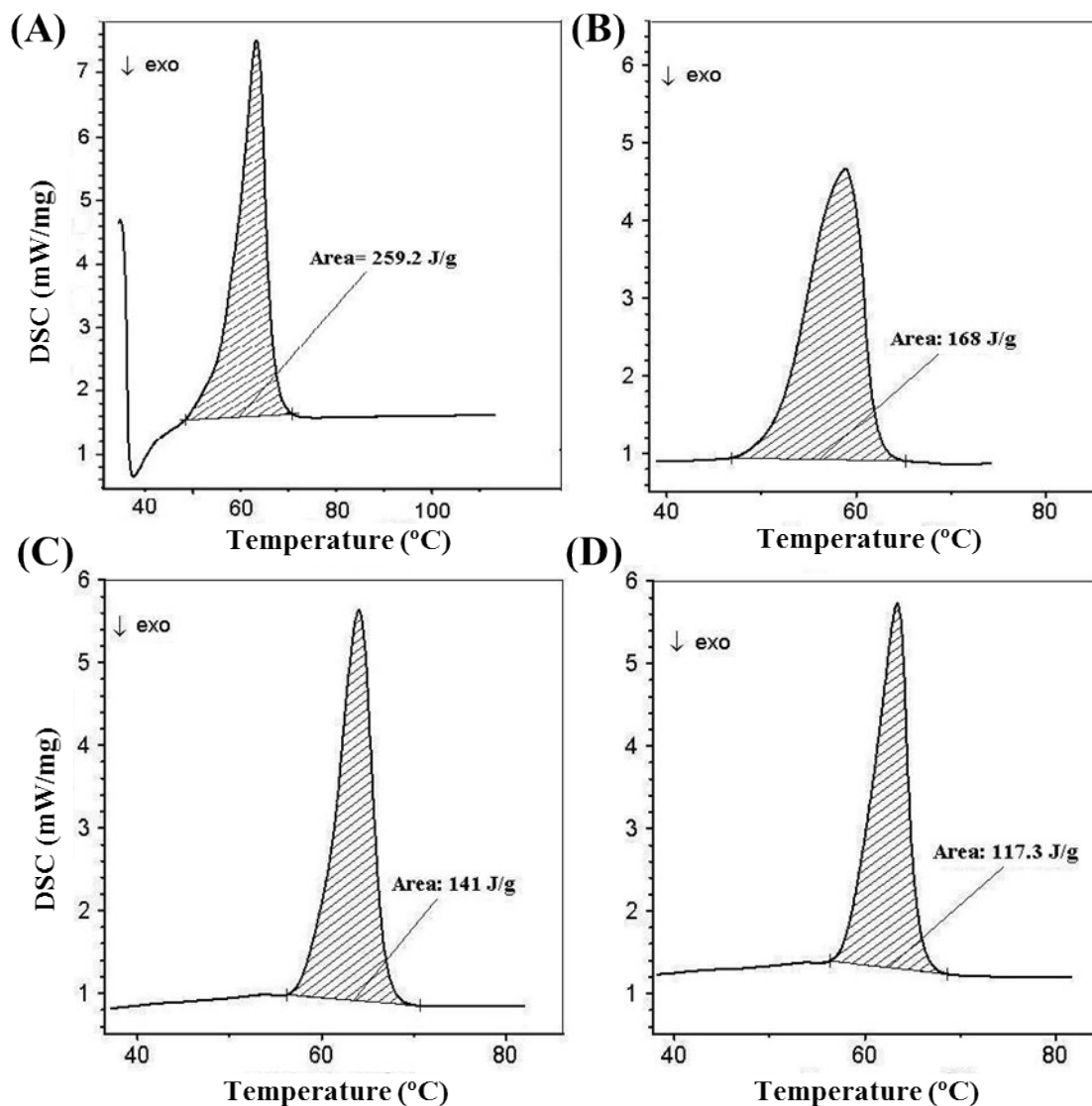
Supplementary Information

Interpenetrating Network Gelatin Methacryloyl (GelMA) and Pectin-g-PCL Hydrogels with Tunable Properties for Tissue Engineering

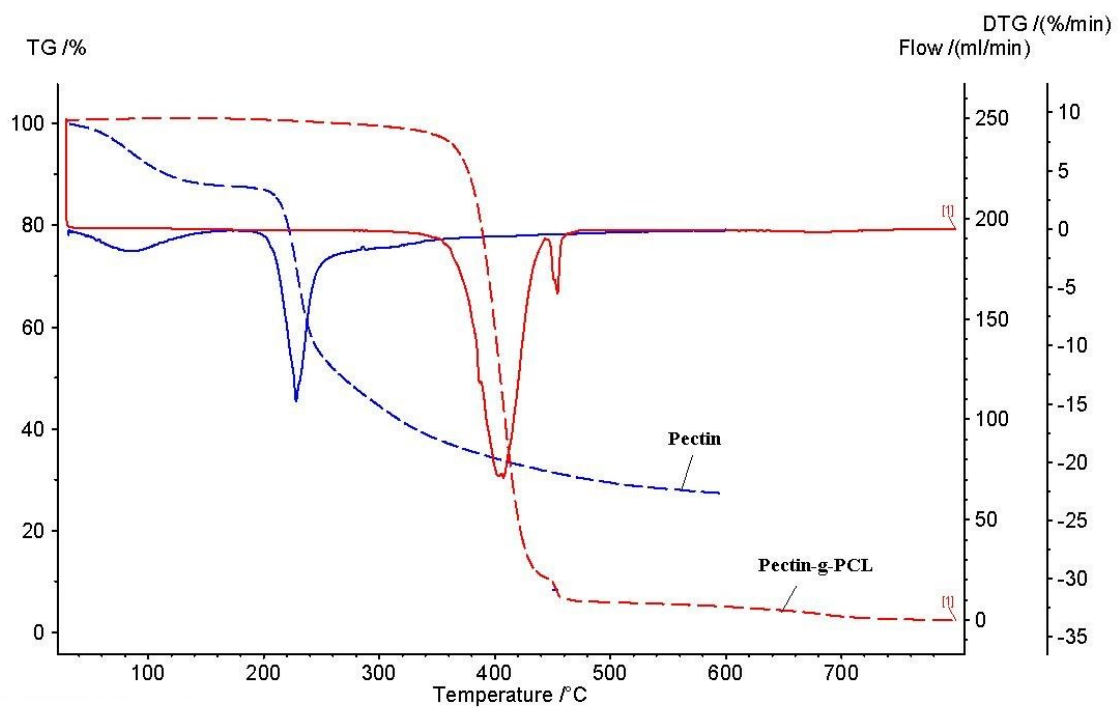
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Supplementary Table 1. Characteristic peaks and vibrational assignments of Pectin and Pectin-g-PCL hydrogels

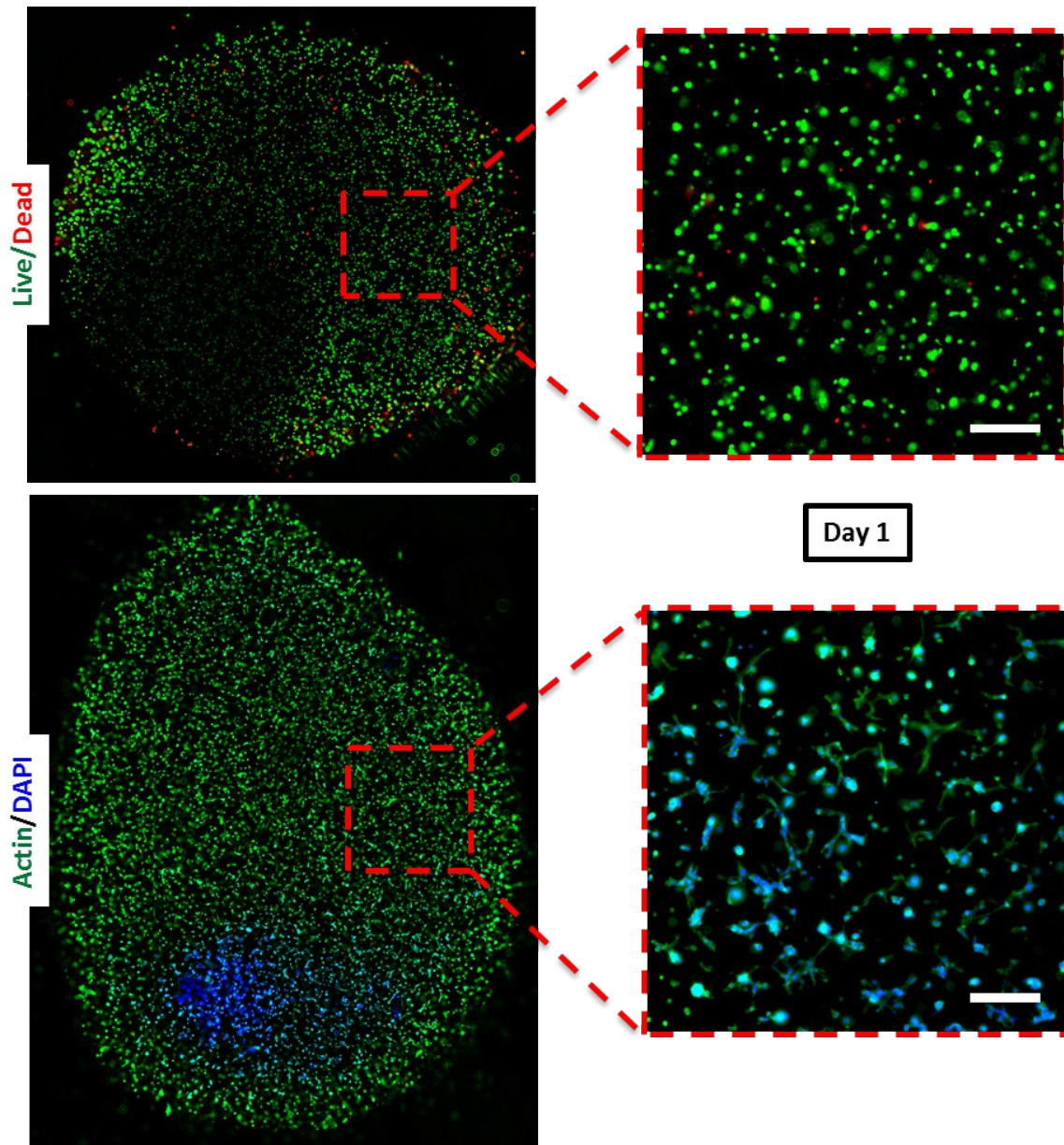
Polymer	Characteristic peaks		Vibrational Assignment
	Wavenumber (cm ⁻¹)	Normalized Absorbance	
Pectin	3269	1.07	OH stretching of secondary alcohol
	2945	0.98	Asymmetric CH stretching
	2870	0.69	Symmetric CH stretching
	1744	1.24	C=O stretching of acid and/or ester
	1608	0.68	Asymmetric COO ⁻ stretching of acid
	1410	0.84	Symmetric COO ⁻ stretching of acid
	1147	1.00	C–O–C stretching
	1100	1.48	C–O stretching of D-galacturonic acid ring
Pectin-g-PCL	3269	0.19	OH stretching of secondary alcohol
	2945	2.00	Asymmetric CH stretching in pectin and PCL
	2870	1.53	Symmetric CH stretching in pectin and PCL
	1744	1.76	C=O stretching of pectin
	1729	3.25	C=O stretching of PCL
	1293	1.44	C–O and C–C in the crystalline phase of PCL
	1240	1.94	Asymmetric C–O–C stretching of PCL
	1170	2.21	Symmetric C–O–C stretching of PCL
	1147	1.00	C–O–C stretching of pectin
	1107	0.74	C–O stretching of D-galacturonic acid ring



Supplementary Figure 1. Structural analysis of Pectin-g-PCL. DSC melting endotherm curves of polycaprolactone (PCL) residues in (A) Pectin-g-PCL (1:1), (B) Pectin-g-PCL (1:3), (C) Pectin-g-PCL (1:5) and (D) Pectin-g-PCL (1:10) compounds.



Supplementary Figure 2. Thermogravimetric Analysis (TGA) of pectin and pectin-g-PCL samples.



Supplementary Figure 3. *In-vitro* 3D cell encapsulation of semi-IPN GelMA/pectin-g-PCL hydrogels (10% GelMA, 1.15% Pectin-g-PCL) hydrogels using MC3T3-E1 cells. (A) Representative live/dead images from MC3T3-E1 seeded within the hydrogels on days 1 post encapsulation. (B) Representative Actin/DAPI stained images for MC3T3-E1 cells seeded within the hydrogels on days 1 post encapsulation (scale bar = 200 μm).