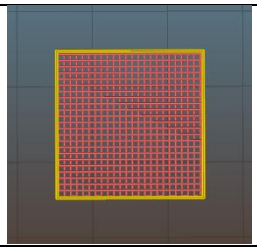
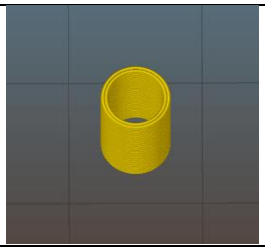
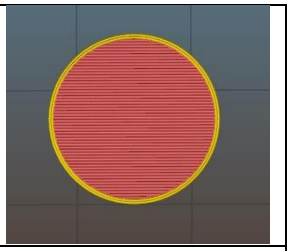
Supporting Information

Table S1. Printing parameters

			
Model	Scaffold	Cylinder - Fresh	In vitro - disc
Size	15x15x0.5 mm	5x20 mm	15x0.5mm
Printing method	Direct extrusion	FRESH	Direct extrusion
Infill %	30	0	80
Perimeters	2	2	2
Nozzle (I.D.)	0.25 mm	0.25 mm	0.25 mm
Speed	8 mm/s	8 mm/s	8 mm/s
Layer height	0.25 mm	0.25 mm	0.25 mm
Extrusion width	120%	120%	120%
			
Model	Ear_left	Nose	
Size	20,5 x38x mm	19.13x30.52x10.95 mm	
Printing method	Direct extrusion	Direct extrusion	
Infill %	100	55	
Perimeters	2	2	
Nozzle (I.D.)	0.51 mm	0.51 mm	
Speed	5 mm/s	6 mm/s	
Layer height	0.5 mm	0.5 mm	
Extrusion width	0%	160%	

DIW = direct extrusión; I.D= Internal diameter

Table S2. PyRheo results for Herschel-Bulkley model

Tinta	sigma_y	k	n	R2	Method	Model
PeGeCol_5	0,0041	3,1362	0,3751	0,9905	train	Herschel-Bulkley
PeGeCol_10	28,9352	64,9172	0,0000	0,8828	train	Herschel-Bulkley
PeGeLap_5	4,2521	0,4995	0,5232	0,9878	train	Herschel-Bulkley
PeGeLap_10	6,0502	195,8457	0,0001	0,8930	train	Herschel-Bulkley
PeGeCol_10_2	0,3896	0,6705	0,6641	0,9955	average	Herschel-Bulkley
PeGeLap_10_2	3,0179	0,4882	0,7009	0,9423	average	Herschel-Bulkley

Table S3. PyRheo results for Bingham model

Tinta	sigma_y	eta_p	R2	Method	Model
PeGeCol_5	7,9211	0,0432	0,9331	average	Bingham
PeGeCol_10	184,0429	0,0176	0,8581	train	Bingham
PeGeLap_5	5,6968	0,021	0,9754	average	Bingham
PeGeLap_10	191,6589	0,019	0,8755	train	Bingham
PeGeCol_10_2	3,5716	0,0732	0,8271	average	Bingham
PeGeLap_10_2	5,2873	0,0688	0,9305	average	Bingham

Table S4. PyRheo results for Power-law model

Tinta	k	n	R2	method	Model
PeGeCol_5	3,7334	0,347	0,9808	train	Power-Law
PeGeCol_10	193,8523	0	0,8828	train	Power-Law
PeGeLap_5	2,1206	0,3384	0,952	train	Power-Law
PeGeLap_10	198,7384	0	0,8879	train	Power-Law
PeGeCol_10_2	0,7767	0,6398	0,9939	train	Power-Law
PeGeLap_10_2	0,8412	0,6258	0,8556	train	Power-Law

Table S5. PyRheo results for Carreau-Yasuda model

Tinta	k	n	eta_zero	eta_inf	a	R2	Method	Model
PeGeCol_5	0,1365	0,3786	0,8396	0,0041	7,9211	0,9834	train	Carreau-Yasuda
PeGeCol_10	1,16643333	0	220,825833	0,0176	44,608	0,8721	average	Carreau-Yasuda
PeGeLap_5	0,3499	0,2017	1,5571	0,0087	1,699	0,9833	train	Carreau-Yasuda
PeGeLap_10	1,5739	0	297,4907	0,019	30,8756	0,8703	train	Carreau-Yasuda
PeGeCol_10_2	2,9699	0,582	1,7756	0,0064	0,3501	0,9904	train	Carreau-Yasuda
PeGeLap_10_2	6,0475	0,6036	1,8207	0,0063	6,0475	0,8633	train	Carreau-Yasuda

Table S6. PyRheo results for Casson model

Tinta	sigma_y	eta_p	R2	Method	Model
PeGeCol_5	7,9212	0,0152	0,9402	train	Casson
PeGeCol_10	116,4396	0,0176	0,6624	train	Casson
PeGeLap_5	5,3864	0,0066	0,9818	average	Casson
PeGeLap_10	122,7717	0,019	0,7109	train	Casson
PeGeCol_10_2	2,2905	0,0471	0,9062	train	Casson
PeGeLap_10_2	2,8147	0,0434	0,9503	train	Casson

Table S7. Cell metabolic activity by HS-alamarBlue

Washing conditions	Time	Mean	SD
No-cell	-	1	0.2935
NW	d0	0.6980	0.1713
	d7	0.0511	0.3558
24h-W	d0	2.2972	0.3454
	d7	28.7116	0.5795
24h-W + MC	d0	1.4301	0.4858
	d7	30.4619	0.4101
48h-W	d0	1.3876	0.2543
	d7	30.0293	0.3810

Figure S1. BINGHAM MODEL PyRheo fitting

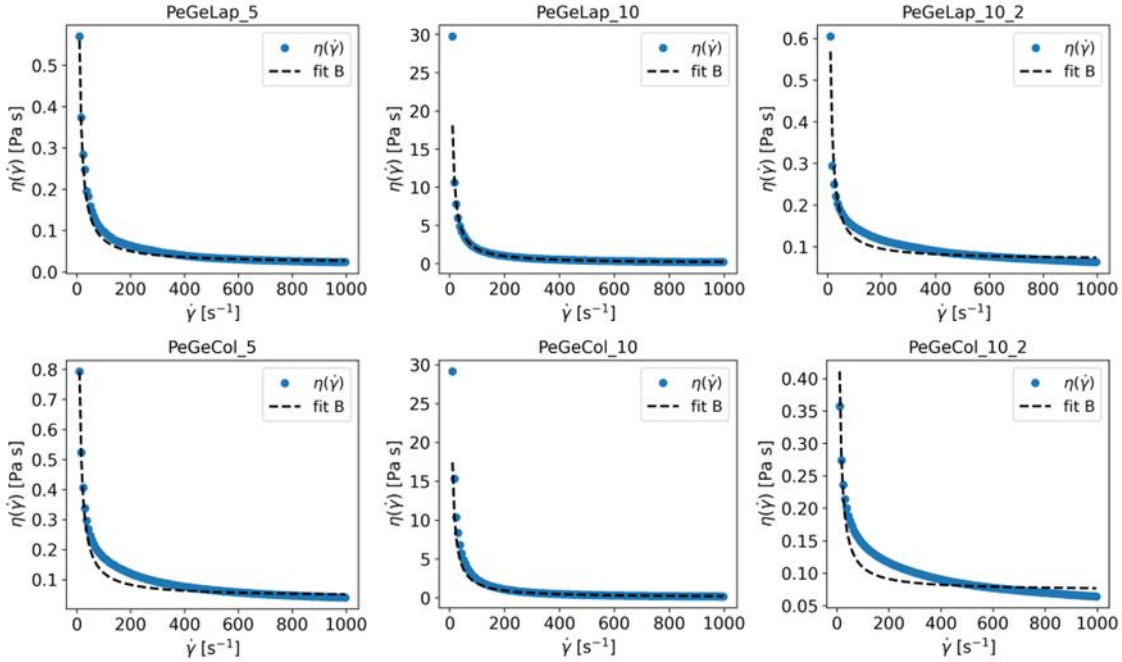


Figure S2. CASSON MODEL PyRheo fitting

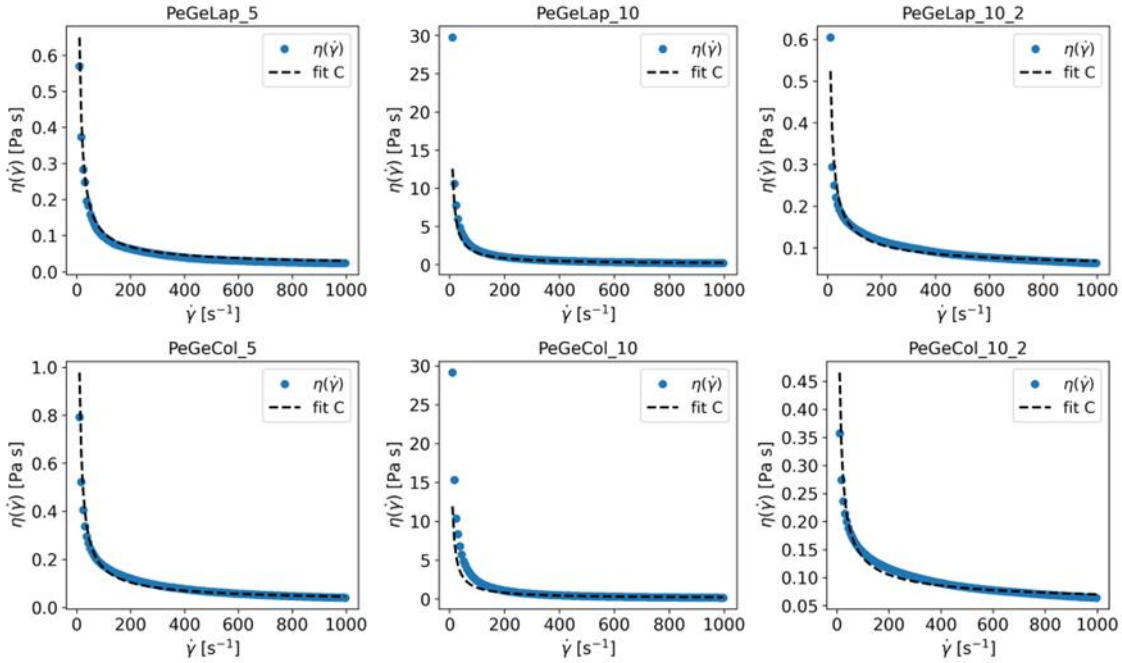


Figure S3. POWER LAW MODEL PyRheo fitting

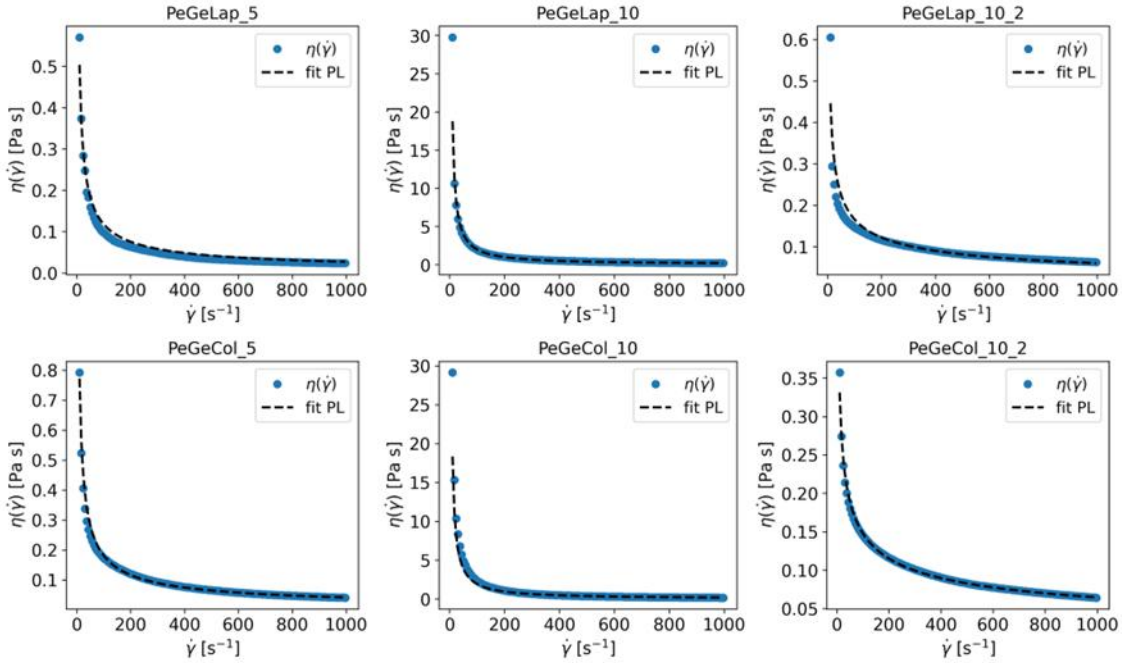


Figure S4. ^{1}H NMR analysis - LAP

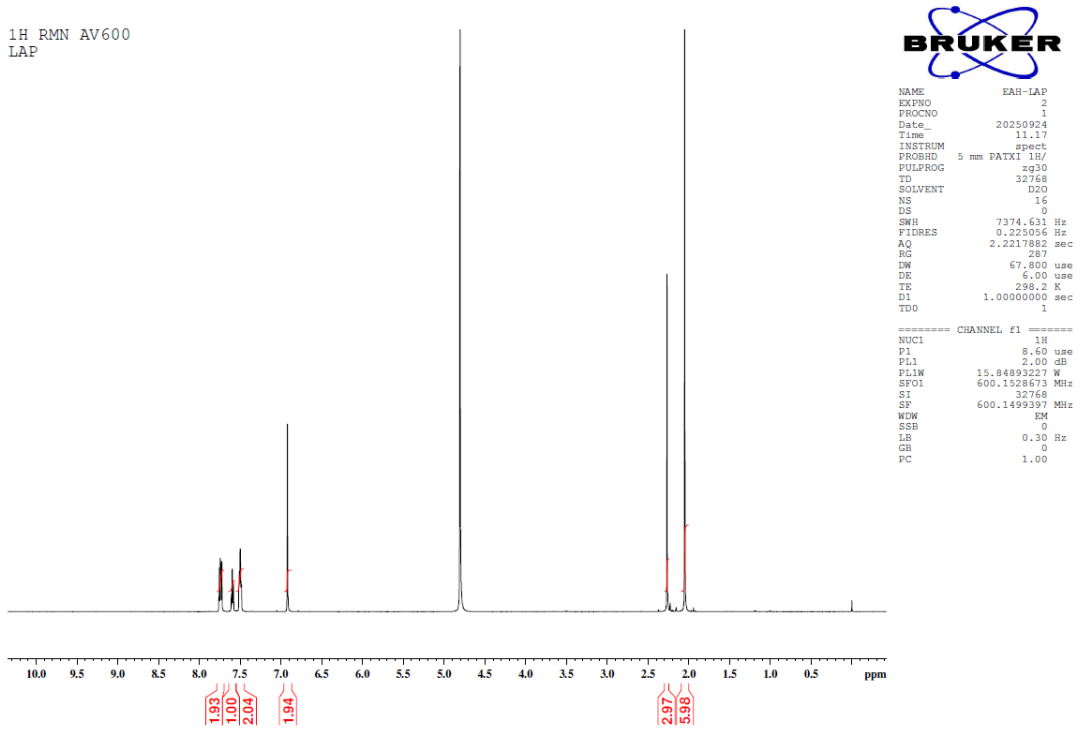


Figure S5. ^{1}H NMR analysis - PEGDA

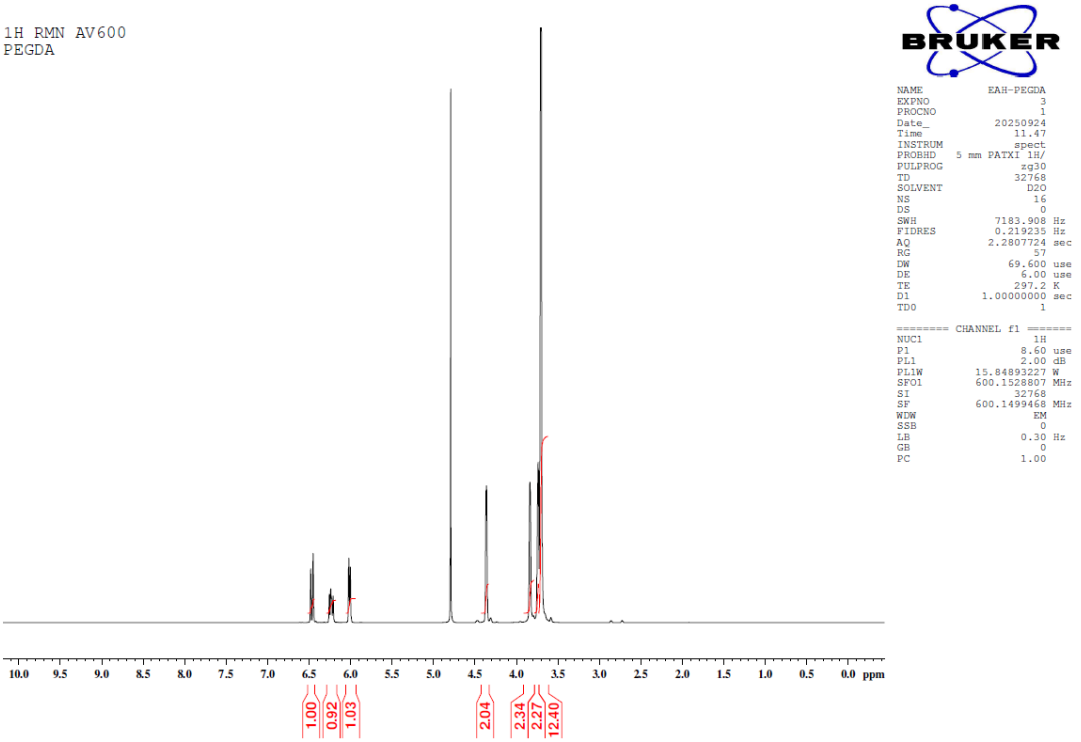


Figure S6. ^{1}H NMR analysis – 24 h-W

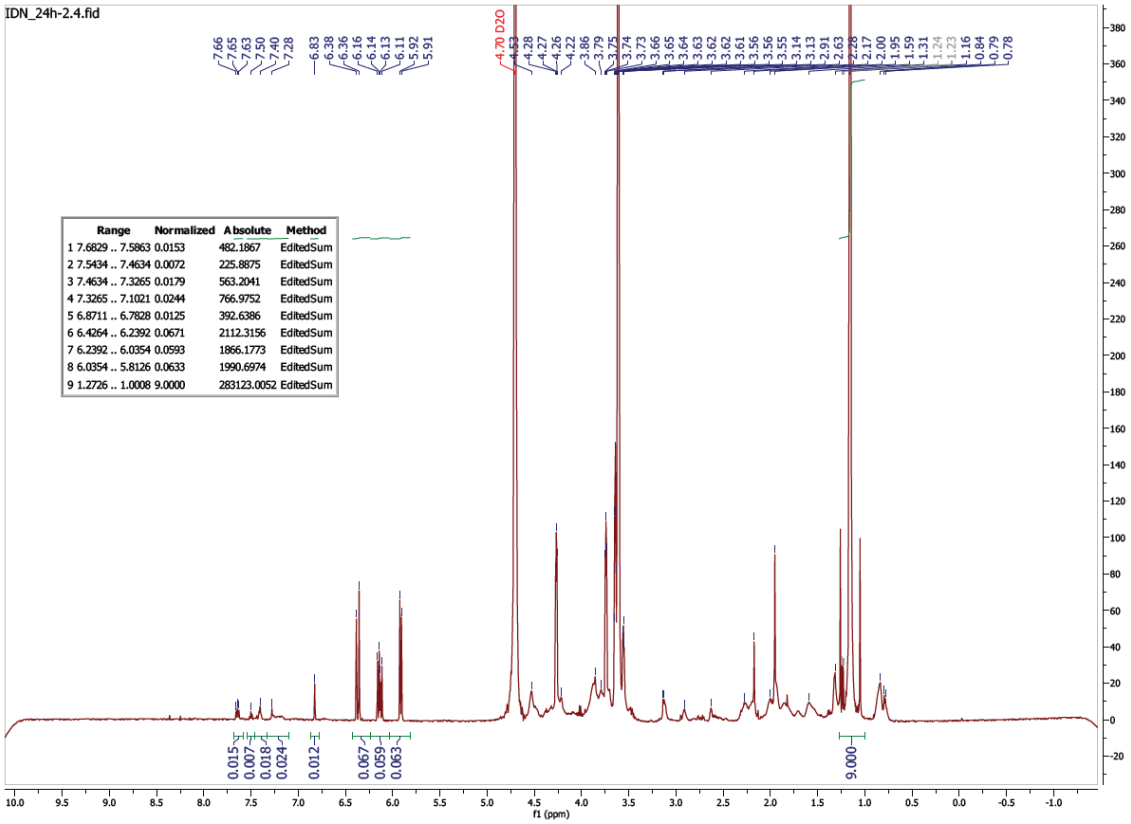


Figure S7. ^{1}H NMR analysis – 24 h-W+MC

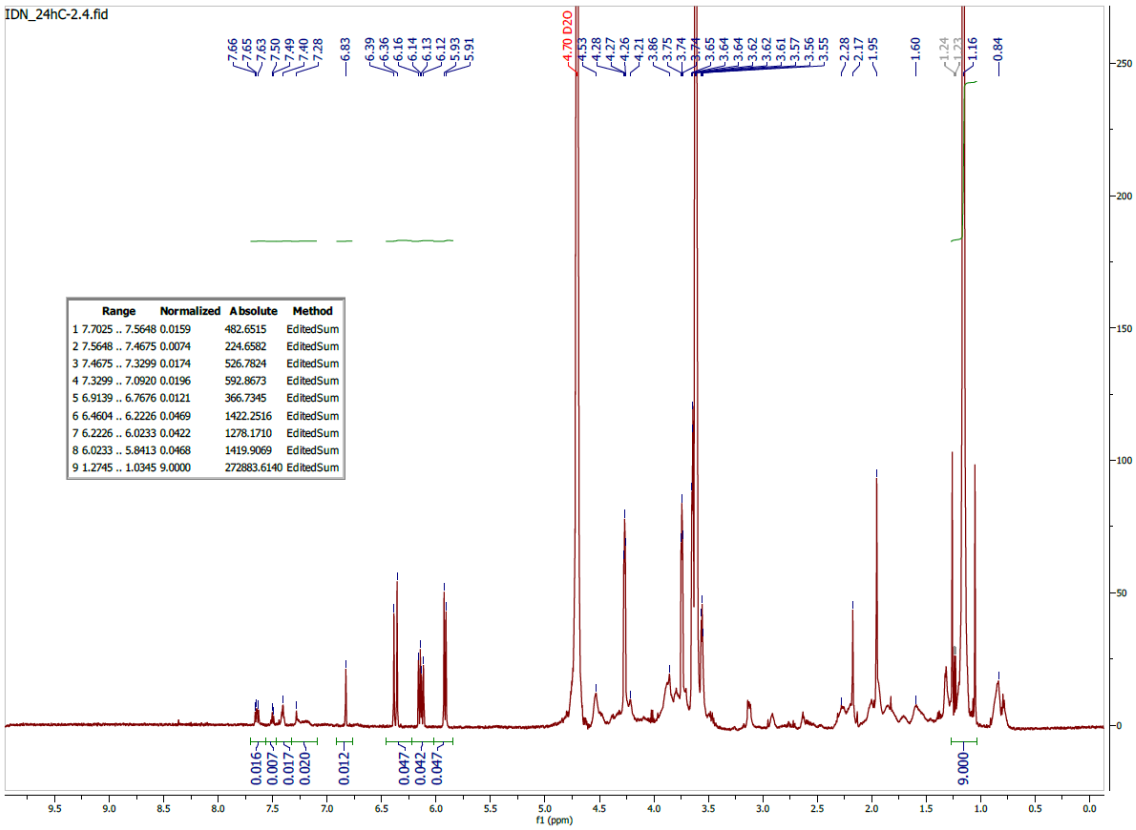


Figure S8. ^{1}H NMR analysis – 48 h-W

