

Materials List for:

# Engineering 3D Cellularized Collagen Gels for Vascular Tissue Regeneration

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## Materials

Name	Company	Catalog Number	Comments
CellTreat 50 ml Bio-Reaction tubes	CELLTREAT Scientific Products	229-475	Centrifuge tube
Male luer with lock ring x 1/8" hose barb. PP. 25/pk	Cole Parmer	RK-45503-04	Luer fittings for "gas-exchange port"
Female luer x 1/8" hose barb adapter. PP. 25/pk	Cole Parmer	RK-45500-04	Luer fittings for the "medium sampling port"
Masterflex platinum-cured silicone tubing L/S 17. 25 ft.	Cole Parmer	RK-96410-17	Tube 1 and 2 for the gauze grippers
Masterflex platinum-cured silicone tubing L/S 16. 25 ft.	Cole Parmer	RK-96410-16	Tube 3 for the gauze grippers
Silastic Medical adhesive silicone, type A	Dow Corning	-	Silicon glue for the fabrication of the static bioreactor
Polyvent 4 Vessel venting filters	Whatman	6713-0425	Filter for "gas exchange port"
Rod. PP. stirring. 8"	Scienceware	377660008	Mandrel
Stopper silicone rubber 00 PK12	VWR	59590-084	Stopper for the insertion of the mandrel to the vented cap of the centrifuge tube
Krytox PFPE/PTFE Greases	Dupont	GPL 202	Medical grade grease for covering the mandrel
Trypsin-EDTA (0.5%)	Gibco	15400-054	Cell culture
Xiameter RTV-4130-J base and curing agent	Dow Corning	-	C-shaped silicone support for endothelialization
Dulbecco's modified Eagle medium, DMEM, high glucose, pyruvate	Gibco (Life Technology)	11995-065	Cell culture
Pure acetone (99%)	Laboratoire Mat Inc.	AP0102	Chemical for collagen extraction
Isopropyl alcohol (HPLC grade, 99.9%)	Fisher Scientific	AC610080040	Chemical for collagen extraction
0.02 N acetic acid (glacial acetic acid, HPLC grade, 99%)	Fisher Scientific	FL070494	Chemical for collagen extraction
Chloroform solution (99%)	Laboratoire Mat Inc.	CR 0179	Chemical for collagen extraction
Hepes	Sigma-Aldrich	163716	Chemical for construct preparation
NaOH	Laboratoire Mat Inc.	SR-0169	Chemical for construct preparation
LaserMike 136	LaserMike	Series 183B	Scanning laser interferometer
ElectroPulse MicroTester	Instron Corporation	-	Micromechanical Tester

HyClone Media M199/EBSS, 500 ml	GE Healthcare Life Sciences	SH30253.01	Component of cell culture medium
Fetal bovine serum HI - 500 ml	Gibco	SH 30396.03	Component of cell culture medium
Porcine serum (PS)	Sigma-Aldrich	P9783	Component of cell culture medium
Penicillin-Streptomycin	Gibco	15140-122	Component of cell culture medium
Phosphate buffered saline (PBS)	Fisher Scientific	BP661-50	Saline solution
Tissue culture flask T17CN Vent Cap Red	Sarstedt Inc.	83.1812.002	Cell culture
ColorpHast- pH-indicator strips (pH = 6.5-10.0)	EMD	9583	pH measurements
Matrigel Basement Membrane Matrix Growth Factor Reduced, 5 ml vial	BD Biosciences - Discovery Labware	356230	Concentrate protein mixture for endothelialization process
LifeCam VX-3000	Microsoft	-	Thickness measurement
Biochemical analyzer, DxC600	Beckman Coulter Unicell Synchron	-	Glucose and lactate concentrations measurements
Collagen fibers	Rat tails	-	Collagen was extracted in the laboratory
Porcine smooth muscle cells (pSMCs)	Porcine aortas	-	pSMCs were isolated in the laboratory
Human umbilical vein endothelial cells (HUVECs)	Human umbilical veins	-	HUVECs were isolated in the laboratory