

Assessing Functional Metrics of Skeletal Muscle Health in Human Skeletal Muscle Microtissues

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Materials

Name	Company	Catalog Number	Comments
0.9% Saline Solution, Sterile	House Brand	1010	10 mL aliquots of the solution are made and stored at 4°C
25G Needle	BD, Medstore, University of Toronto	2548-CABD305127	
6-Aminocaproic Acid, ≥99% (titration), Powder	Sigma - Aldrich	A2504-100G	A 50 mg / mL stock solution is generated by dissolving 5 mg of 6-aminocaproic acid powder in 100 mL of autoclaved, distilled water. The solution is vacuum filtered and 10 mL aliquots are stored at 4°C
6.35 mm ID Tubing	VWR	60985-528	
AB1167 Myoblast Cell Line	Institut de Myologie (Paris, France)		
Arbitrary Waveform Generator	Rigol	DG1022Z	
Basement Membrane Extract (Geltrex)	Thermo Fisher Scientific	A14132-02	Stored as aliquots of 50 µL or 100 µL at -80°C
Benchtop Vacuum Chamber	Sigma - Aldrich	D2672	
BNC to Alligator Clip Cable			Ordered from Amazon
Culture Plastics	Sarstedt		Includes culture plates, serological pipettes, etc
Dimethyl Sulfoxide	Sigma - Aldrich	D8418-250ML	
DPBS, Powder, No Calcium, No Magnesium	Thermo Fisher Scientific	21600069	
Dulbecco's Modified Eagle Medium (DMEM) (1X)	Gibco	11995-065	This is a high glucose DMEM with L-glutamine and sodium pyruvate
Fetal Bovine Serum	Fisher Scientific	10437028	
Fibrinogen from Bovine Plasma	Sigma - Aldrich	F8630-5G	Aliquots ranging from 7 - 10 mg of fibrinogen powder are made and stored at -20°C
Filtropur Syringe Filter, 0.22µm Pore Size	Sarstedt	83.1826.001	
Horse Serum	Gibco	16050-122	
Human Recombinant Insulin	Sigma - Aldrich	91077C	Stock solution is 100X and made by dissolving 1 mg of human

			recombinant insulin in 1 mL of DMEM and 1 μ L of NaOH 10N. Solution is filtered and stored as 1 mL aliquots at 4°C
Image Acquisition Software	Olympus	cellSens Dimension	
Image Processing Software	National Institutes of Health	ImageJ	
Isotemp Oven	Thermo Fisher Scientific	201	
Microscope	Olympus	IX83	
Microscope - Camera Mount	Labcam	Labcam for iPhone	Ordered from Amazon
Penicillin-Streptomycin (10,000 U/mL)	Gibco	15140-122	
Plastic Disposable Syringes, 1cc	BD	2606-309659	
Plastic Disposable Syringes, 50cc	BD	2612-309653	
Pluronic F-127, Powder, BioReagent	Sigma - Aldrich	P2443-250G	A 5% stock solution of pluronic acid is made by dissolving 5 g of pluronic acid powder in 100 mL of chilled, autoclaved, distilled water. The solution is vacuum filtered and 10 mL aliquots are stored at 4°C
Polydimethylsiloxane (Sylgard 184 Silicone Elastomer Kit)	Dow	4019862	Kits are also available at Thermo Fisher Scientific, Sigma - Aldrich, etc.
Polyurethane Negative Mold	In House		
Release Agent	Mann Release Technologies	200	
Rotary Vane Vacuum Pump	Edwards	A65401906	
Scalpel	Almedic, Medstore, University of Toronto	2586-M36-0100	
Single Edge Razor Blade	VWR	55411-050	
Skeletal Muscle Cell Basal Medium	Promocell	C-23260	30 mL aliquotes are generated and stored at 4°C.
Skeletal Muscle Cell Growth Medium (Ready-to-use)	Promocell	C-23060	42 mL aliquots are generated and stored at 4°C.
Smartphone (iPhone)	Apple	SE	
Standard Duty Dry Vacuum Pump	Welch	2546B-01	
Sterilization Bag	Alliance	211-SCM2	
Thimble	Igege		Ordered from Amazon
Thrombin from human plasma	Sigma - Aldrich	T6884-250UN	100 units of thrombin is dissolved in 1 mL of a 0.1% BSA solution. 10 μ L aliquots are prepared and stored at -20°C.
Tin coated copper wire	Arco	B8871K48	Ordered from Amazon
Trypan Blue Solution, 0.4%	Thermo Scientific	15250061	
Trypsin-EDTA, 0.25%	Thermo Fisher Scientific	25200072	
Vacuum Chamber 2	SP Bel-Art	F42027-0000	