Materials List for:

Hollow Fiber Bioreactors for *In Vivo*-like Mammalian Tissue Culture

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Materials

Name	Company	Catalog Number	Comments
Glass HFB Module	Soham Scientific	---	Custom Item. (Section 2)
Sigmacote	Sigma-Aldrich	SL2	(Section 2.1)
Silicoset 151	Intertronics	ACCSS151	Silicone Glue. (Section 2.3)
PTFE tape	Sigma-Aldrich	Z104388	(Section 2.5)
Reservoir bottle	Fisher	11972619	PTFE the screw threads of the adapters and fitting nut. Attach to the Q-series cap. Attach an 8.5 cm section of the supplied PTFE tubing under the 1 mm adapter and a 4 cm section under the 3 mm adapter. (Section 3.2.1)
Q-series cap	Kinesis	00932Q-3V	PTFE the screw threads of the adapters and fitting nut. Attach to the Q-series cap. Attach an 8.5 cm section of the supplied PTFE tubing under the 1 mm adapter and a 4 cm section under the 3 mm adapter. (Section 3.2.1)
Adapter, Male, 1.0 mm ID	Kinesis	008NB10-KD5L	PTFE the screw threads of the adapters and fitting nut. Attach to the Q-series cap. Attach an 8.5 cm section of the supplied PTFE tubing under the 1 mm adapter and a 4 cm section under the 3 mm adapter. (Section 3.2.1)
Adapter, Male, 3.0 mm ID	Kinesis	008NB30-KD5L	PTFE the screw threads of the adapters and fitting nut. Attach to the Q-series cap. Attach an 8.5 cm section of the supplied PTFE tubing under the 1 mm adapter and a 4 cm section under the 3 mm adapter. (Section 3.2.1)
Fitting Nut	Kinesis	U-350	PTFE the screw threads of the adapters and fitting nut. Attach to the Q-series cap. Attach an 8.5 cm section of the supplied PTFE tubing under the 1 mm adapter and a 4 cm section under the 3 mm adapter. (Section 3.2.1)
Neoprene tubing	Fisher	10366344	Attach the Hepa filter to 6cm of neoprene tubing and attach this to the 'fitting nut'. Attach a 2x 30 mm sections of L/S14 tubing to the top two barbs of the Y-connector and a 3 cm section of L/S16 tubing to

			the bottom. Attach this to the barb of the 3 mm ID adapter. (Section 3.2.1)
HEPA-vent	Fisher	11374634	Attach the Hepa filter to 6cm of neoprene tubing and attach this to the 'fitting nut'. Attach a 2x 30 mm sections of L/S14 tubing to the top two barbs of the Y-connector and a 3 cm section of L/S16 tubing to the bottom. Attach this to the barb of the 3 mm ID adapter. (Section 3.2.1)
Y-connector, barbed	Cole Parmer	OU-06295-10	Attach the Hepa filter to 6 cm of neoprene tubing and attach this to the 'fitting nut'. Attach a 2x 30 mm sections of L/S14 tubing to the top two barbs of the Y-connector and a 3 cm section of L/S16 tubing to the bottom. Attach this to the barb of the 3 mm ID adapter. (Section 3.2.1)
L/S16 Silicone tubing	Cole Parmer	OU-96410-16	Attach the Hepa filter to 6cm of neoprene tubing and attach this to the 'fitting nut'. Attach a 2x 30 mm sections of L/S14 tubing to the top two barbs of the Y-connector and a 3 cm section of L/S16 tubing to the bottom. Attach this to the barb of the 3 mm ID adapter. (Section 3.2.1)
L/S14 Silicone tubing	Cole Parmer	WZ-96410-14	Attach the Hepa filter to 6cm of neoprene tubing and attach this to the 'fitting nut'. Attach a 2x 30 mm sections of L/S14 tubing to the top two barbs of the Y-connector and a 3 cm section of L/S16 tubing to the bottom. Attach this to the barb of the 3 mm ID adapter. (Section 3.2.1)
L/S13 Silicone tubing	Cole Parmer	OU-96410-13	80 cm to connect the 1.0 mm barbed adapter on the Q-series cap to the pump tubing = Feed tube. (Section 3.2.1)
WM 205U/CA pump	Fisher	1248-6300	(Section 3.2.1)
WM pump tubing, PVC, blue-orange, 0.25 mm bore	Fisher	12416310	PTFE the screw thred of the male adapter and connect the female adapter. Work the pump tubing over one of the barbs. Repeat this set-up at the other end of the tubing. (Section 3.2.1)
Adapter, Male, 1.0 mm ID	Kinesis	008NB10-KD5L	PTFE the screw thread of the male adapter and connect the female adapter. Work the pump tubing over one of the barbs. Repeat this set-up at the other end of the tubing. (Section 3.2.1)
Adapter, Female, 1.0 mm ID	Kinesis	008NB10-KD2L	PTFE the screw thred of the male adapter and connect the female adapter. Work the pump tubing over one of the barbs. Repeat this set-up at the other end of the tubing. (Section 3.2.1)
Female Luer cap	Cole Parmer	WZ-45508-64	Side port end caps. (Section 3.2.2)

L/S13 Silicone tubing	Cole Parmer	OU-96410-13	40 mm section to connect the pump tubing to a module connector. (Section 3.2.2)
L/S16 Silicone tubing	Cole Parmer	OU-96410-16	3x 30 mm of L/S16 fitted to 3x reducers = module connectors. (Section 3.2.2)
Barbed reducer 1/8"x1/16"	Cole Parmer	30616-43	3x 30 mm of L/S16 fitted to 3x reducers = module connectors. (Section 3.2.2)
L/S13 Silicone tubing	Cole Parmer	OU-96410-13	55 cm section to connect the retentate to the L/S14 of the Y-connector on the Q-series cap. (Section 3.2.4)
L/S13 Silicone tubing	Cole Parmer	OU-96410-13	45 cm section to connect the permeate to the L/S14 of the Y-connector on the Q-series cap. (Section 3.2.4)
Straight barbed union	Cole Parmer	WZ-30612-43	Attach to the end of the L/S13 that will connect with the L/S14 of the Y-connector. (Section 3.2.4)
Clamp	VWR	229-0609	(Section 3.4.2)
4 mm Silicone tubing	Fisher	FB68858	Fold over a 40 mm section of tubing and secure with a cable tie = Module end cap. (Section 4.3)
Cable tie	Fisher	12326377	Fold over a 40 mm section of tubing and secure with a cable tie = Module end cap. (Section 4.3)
MACSmix tube rotator	Miltenyi Biotech	130-090-753	An adaptation may be required to attach the modules. (Section 4.4)
Leur Injection port	Thistle Scientific	IB-10820	Attach the end cap to the injection port. (Section 4.5)
Female Luer cap	Cole Parmer	WZ-45508-64	Attach the end cap to the injection port. (Section 4.5)
L-lactic acid kit	Megazyme	K-LATE	(Section 5)
D-glucose kit	Megazyme	K-GLUC	(Section 5)
Scalpel / micro knife	InterFocus	10315-12	(Section 6.2)
Albumin ELISA	Bethyl Labs	E80-129	(Section 7.4.3)