

Materials List for:

Determination of the Transport Rate of Xenobiotics and Nanomaterials Across the Placenta using the *ex vivo* Human Placental Perfusion Model

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URL: <https://www.jove.com/video/50401>

DOI: [doi:10.3791/50401](https://doi.org/10.3791/50401)

Materials

Name	Company	Catalog Number	Comments
NCTC-135 medium	ICN Biomedicals, Inc.	10-911-22C	could be replaced by Medium 199 from Sigma (M3769)
Sodium chloride (NaCl)	Sigma-Aldrich, Fluka	71381	
Potassium chloride (KCl)	Hospital pharmacy		also possible: Sigma (P9541)
Monosodium phosphate (NaH ₂ PO ₄ · H ₂ O)	Merck	106346	
Magnesium sulfate (MgSO ₄ · H ₂ O)	Sigma-Aldrich, Fluka	63139	
Calcium chloride (CaCl ₂ , anhydrous)	Merck	102388	
D(+) Glucose (anhydrous)	Sigma-Aldrich, Fluka	49138	
Sodium bicarbonate (NaHCO ₃)	Merck	106329	
Dextran from Leuconostoc spp.	Sigma-Aldrich	31389	
Bovine serum albumin (BSA)	Applichem	A1391	
Amoxicilline (Clamoxyl)	GlaxoSmithKline AG	2021101A	
Sodium heparin	B. Braun Medical AG	3511014	
Sodium hydroxide (NaOH) pellets	Merck	106498	CAUTION: corrosive
Ortho-phosphoric acid 85% (H ₃ PO ₄)	Merck	100573	CAUTION: corrosive
Maternal gas mixture: 95% synthetic air, 5% CO ₂	PanGas AG		
Fetal gas mixture: 95% N ₂ , 5% CO ₂	PanGas AG		
Antipyrine (N-methyl- ¹⁴ C)	American Radiolabeled Chemicals, Inc.	ARC 0108-50 µCi	CAUTION: radioactive material (specific activity: 55mCi/mmol)
Scintillation cocktail (IrgaSafe Plus)	Zinsser Analytic GmbH	1003100	
Polystyrene particles 80 nm	Polyscience, Inc.	17150	
Polystyrene particles 500 nm	Polyscience, Inc.	17152	
EQUIPMENT			
Water bath	VWR	462-7001	
Thermostat	IKA-Werke GmbH Co. KG	3164000	
Peristaltic pumps	Ismatec	ISM 833	
Bubble traps (glass)	UNI-GLAS Laborbedarf		
Flow heater	UNI-GLAS Laborbedarf		

Pressure sensor + Software for analyses	MSR Electronics GmbH	145B5	
Notebook	Hewlett Packard		
Miniature gas exchange oxygenator	Living Systems Instrumentation	LSI-OXR	
Tygon Tube (ID: 1.6 mm; OD: 4.8 mm)	Ismatec	MF0028	
Tubes for pumps (PharMed BPT; ID: 1.52 mm)	Ismatec	SC0744	
Blunt cannulae (0.8 mm)	Polymed Medical Center	03.592.81	
Blunt cannulae (1.2 mm)	Polymed Medical Center	03.592.90	
Blunt cannulae (1.5 mm)	Polymed Medical Center	03.592.94	
Blunt cannulae (1.8 mm)	Polymed Medical Center	03.952.82	
Parafilm	VWR	291-1212	
Perfusion chamber with tissue holder (plexiglass)	Internal technical department		Similar equipment is available from Hemotek Limited, UK
Surgical suture material (PremiCron)	B. Braun Medical AG	C0026005	
Winged Needle Infusion Set (21G Butterfly)	Hospira, Inc.	ASN 2102	
Multidirectional stopcock (Discofix C-3)	B. Braun Medical AG	16494C	
Surgical scissors	B. Braun Medical AG	BC304R	
Dissecting scissors	B. Braun Medical AG	BC162R	
Needle holder	B. Braun Medical AG	BM200R	
Dissecting forceps	B. Braun Medical AG	BD215R	
Automated blood gas system	Radiometer Medical ApS	ABL800 FLEX	
Multi-mode microplate reader	BioTek	Synergy HT	
Liquid scintillation analyzer	GMI, Inc.	Packard Tri-Carb 2200	
Scintillation tubes 5.5 ml	Zinsser Analytic GmbH	3020001	
Tissue Homogenizer	OMNI, Inc.	TH-220	
pH meter + electrode	VWR	662-2779	