

Materials List for:

Murine Isolated Heart Model of Myocardial Stunning Associated with Cardioplegic Arrest

Brenda Cordeiro¹, Richard Clements^{1,2}

¹Cardiothoracic Surgery Research Center, Brown University

²Rhode Island Hospital and Alpert Medical School, Brown University

Correspondence to: Richard Clements at richard_clements@brown.edu

URL: <https://www.jove.com/video/52433>

DOI: [doi:10.3791/52433](https://doi.org/10.3791/52433)

Materials

Name	Company	Catalog Number	Comments
Cardioplegia Solution (St Thomas II)			Symbol / Concentrations (mM)
Sodium Chloride			NaCl; 110
Potassium chloride			KCl; 16
Calcium Chloride			CaCL2; 1.5
Magnesium Chloride			MgCL2; 16
Sodium Bicarbonate			NaHCO3; 10
Krebs-Heinslet Buffer			
Sodium Chloride			NaCl; 118
Potassium Chloride			KCl; 4.8
Magnesium Sulfate			MgSO4; 1.7
Sodium Bicarbonate			NaHCO3; 24.9
Potassium Phosphate (monobasic)			KH2PO4; 1.2
Calcium Chloride			CaCL2; 1.4
Sodium Pyruvate			Na pyruvate; 2
Glucose			C6H12O6; 6
Balloon reagents			
Corn Syrup			
Spaghetti			
Silicon Dispersion Gel			
styrofoam block			
lab oven/incubator (50C)			
Langendorff Perfusion equipment			
Isolated perfused heart sytem (IH-SR (Hugo-Sachs) or equivalent)			
Data acquisition system (DSI, ADInstruments or equivalent)			
Heated water circulator			
Cooling water circulator			
Perfusion pump capable of 2-30 ml/min			
Inline perfusion filters - 1 um glass fiber			
Pressure sensors and amplifiers for LVP and perfusion pressure			

Small graduated cylinder (~10 mL)			
Small temperature probe and thermometer (Werner or equivalent)			
perfusion reservoir (1L)			
cardioplegia reservoir (~200 mL)			
gas bubbler			
95/5 O2/CO2 mix			
Surgical tools and reagents			
Metzenbaum and Potz surgical scissors			
two Dumont size 5 forceps			
ketamine			
xylazine			
heparin			
small clamp with soft sides to hold aorta (i.e. terminal clamp with taped ends)			
Silk 2-0 and 4-0 sutures			