

Appendix G: Recovered Tissue Treatment and Final Outcomes for Clinical Studies

First Author, Year	Tissue Recovered	Number of Samples Recovered	Temporary storage solution	Long Term Storage Solution and Parameters	Tissue Viability	Proportion of Positive Cultures or Microbial Load Post-Processing	Shipping Solution and Parameters
Heng, 2013	Aortic, pulmonary mitral valves	57	1-10°C saline	10% DMSO in M199 -196°C for up to 5 years. Double cryogenic bags.	Valves visually inspected, tested for leakage/regurgitation with saline (prior to disinfection). Atrial and ventricular myocardium, aorta and pulmonary artery examined histopathologically.	11.1% (4/36)	Transported in charged dry shipper at -135°C
						4.76% (1/21)	
Goffin, 2000	Cardiac allografts (heart & arterial roots)	1817 hearts, 12 semilunar valves	cold-ice sterile medium (ringer, saline, eurocollins, M199)	10% DMSO, -140°C to -190°C	Leaflet competence test	5.8% (100/1739)	10% DMSO, dry shipper, -140°C to -190°C *

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Vergheese, 1999	Heart (whole)	302	HBSS (salt solution) with antibiotics, on ice	10% DMSO in M199, -120°C to -170°C	NR	NR	Samples placed into sterile plastic bags and immersed in Hank's balanced salt solution with antibiotics. It is stored in an ice pack surrounded by sterile ice for transportation.
Goffin, 1996	Cardiac allografts (heart & arterial roots)	989	cold-ice sterile medium (Ringer, saline, Eurocollins, M199)	10% DMSO in TCM 199, -150°C, double bag	Leaflet leakage tested	4.1% (43/974)	Dry shipper or air, 150°C or dry ice

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Gall, 1995	Cardiac valves (whole heart, heart valve block)	680	M199 with penicillin/streptomycin (Cadaver/ multi organ) No solution (Multi-organ/donor)	10% DMSO in M199, -135°C	NR	0% (0/47) Heart transplant	Wet ice (whole heart), or cold packs (valve blocks)
						21% (21/99) Multi-organ (no abx)	
						2% (1/61) Multi-organ (with abx)	
						3% (9/345) (mortuary)	
Schubert, 2012	Bone	2447	Sterile dry container at 4°C	NR	NR	18.8% (39/208; no antibiotics)	NR
						8% (42/527; 0.1% thimerosal)	
						4.6% (79/1712; 1.2g/l rifampicin)	
Gocke, 2005	Bone and tissue	297,644 samples 4488	NR, shipped on ice overnight	NR	NR	NR	On ice, overnight

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		donors					
Sommerville, 2000	Bone (femoral head)	232	None	NR	Not Done	NR	NR
Journeaux, 1999	Bone (femur, tibia, hemipelvis)	401	NR	NR	NR	NR	NR
Bettin, 1998	Bone	431	NR	NR	NR	NR	NR
Campbell, 1995	Bone (femoral head/long bones)	2361	Wrapped in sterile bags	-70°C	Histopathology	1.1% (27/2361)	NR
Chapman, 1992	Bone (femoral head/whole bones)	35	NR	NR	NR	0% (0/30) (5 discarded)	NR
Schubert, 2012	Tendon	3315	Sterile dry container at	NR	NR	6.9% (7/101; no antiseptics)	NR

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			4°C			10.4% (12/115; 90% alcohol) 4.6% of (143/3099; 0.02% chlorohexadine in 70% alcohol)	
Gocke, 2005	Tendon, fascia	NR	NR	NR	NR	NR	NR

NR: Not reported