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General Guideline for Cryoprotective Agent Used for Specific Cells Lines

Permeating Cryoprotective Agents						Non-Permeating Cryoprotective Agents				
						Osmotically Active Smaller Molecules		Osmotically Inactive Macromolecules		
Cell line	DMSO	Ethylene Glycol	Ethanediol	Propanediol (PROH	Glycerol	Trehalose	Sucrose	Hydroxyethyl Starch (HES)	Poly (vinyl Pyrrolidone	polyvinyl alcohol (PVA)
Commercial Immortalized cell lines	✓	✓								
clinical Transplantation										
chimeric antigen receptor (CAR)-T Cells	✓									
T Cells	✓									
Stem Cells	✓									
Sperms	✓	✓								
Oocytes	✓	✓					✓			
Hepatocytes										
Pluripotent Stem Cell		✓					✓			
Red blood cells					✓					
Hepatic cells and Tissues	✓									
Cardiac Cells and Tissues	✓									
Embryonic Stem Cells	✓									
Tissues:										
Whole mount Retina	✓	✓				✓				
Rabbit Renal Cortical Slices	✓								✓	
Fish										✓
Insects										✓
AML-12 hepatocytes				✓		✓				
Mice Blastocyst		✓		✓						
3T3 Mouse Fibroblast Cells	✓									
Mouse Myoblast Cells (C1C12)		✓					✓			
primary rat stem cells										
type III α- fetoprotein protected A549 cell monolayers	✓									
Human WRL-68	✓	✓							✓	
HepG2	✓									

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