

**Table 5: Cord blood and tissue collection, processing and quality data**

	<b>Cord Blood</b>		<b>Cord Tissue</b>
<b>Sample</b>	6 ml cord blood	10-35 ml cord blood	2 x ½-1 cm sections cord tissue
<b>Sample collected into</b>	1 x 6 ml K2EDTA 10.8 mg tube (BD Diagnostics catalogue number 367873)	1 x 50 ml sterile light protected tube containing 20mls RPMI 1640 Medium (Gibco, 11875101 Life Technologies) and 750 units sodium heparin in saline with pH adjusted to 7.23 - 7.60 using sterile hydrochloric acid or sodium hydroxide if necessary	1 x 70 ml specimen jar (non-sterile) containing 20-30 ml Dulbecco's phosphate-buffered saline (DPBS Invitrogen Catalogue 14190-250)
<b>Transport</b>	On ice	Ambient	On ice or ambient
<b>Laboratory processing</b>	Centrifuge at 2200g for 10 min at 4°C Aliquot plasma into 3 cryovials, Mix remaining cell pallet and aliquot into 3 further cryovials Freeze all at -80°C	Cord blood is processed using a protocol adapted from the 'BIO Cord Blood Processing – Double Layering' protocol from Childhood Allergy and Immunology Research (C.A.I.R.), School of Pediatrics and Child Health at the University of Western Australia Plasma in RPMI is separated from the whole blood and frozen at -80°C Red blood cells and granulocytes are frozen at -80°C Mononuclear cells (monocytes and lymphocytes) are frozen at a concentration of 20 million per ml in liquid nitrogen	Drain off DPBS solution. Pour in more solution then drain off again 1 piece cord tissue in empty cryovial 2 <sup>nd</sup> piece of cord tissue placed into another cryovial and sample covered with RNAlater® Stabilization Solution (Ambion, AM7020 Life Technologies) Both samples stored at -80°C
<b>Quality data</b>	Date and time of sample collection		
	Time sample placed on ice		
	Date and time of arrival at laboratory		
	Confirmation sample arrives at laboratory on ice	Date and time processing began. (Note samples more than 12 hours old or less than 10 ml of cord blood are discarded)	
Date and time processed samples frozen		Date and time processed samples frozen	