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Section: Virology Manual	Subject Title: Tissue/Biopsy Specimens	
Issued by: LABORATORY MANAGER	Original Date: March 14, 2001	
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TISSUE/BIOPSY SPECIMENS

I. Introduction

The following viruses may be detected from various tissue or biopsy sources:

Lung: Adenovirus/CMV/enterovirus/respiratory viruses

Liver: CMV/non-culturable viral hepatitis

Brain: HSV/VZV/enterovirus/measles

Kidney: CMV

Heart: Enterovirus

Postpartum: CMV

Bone Marrow: CMV

For other viruses requested, refer to Appendix XV (Virus isolation and identification) to ensure the appropriate media is inoculated.

II. Collection and Transport

The sample should be collected directly adjacent to the affected tissue and placed in viral transport medium. If a delay in transport or processing is anticipated, keep the specimen at 4°C.

III. Procedure

A. Processing of Specimens:

- a) If the tissue is received in a dry container, add 1-3 ml of maintenance medium.
- b) Macerate the tissue using the small tissue grinder.
- c) If a large amount of tissue/cellular material is present, transfer suspension to a sterile 15 ml centrifuge tube and spin at 700 x g for 10 minutes
- c) Use the supernate as inoculum.

If Fetal / Post-partum tissue is received and Parvovirus PCR is requested, forward specimen to the Hospital for Sick Children for processing.

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B. Direct Examination:

Not usually performed.

C. Isolation and Identification:

Specimens	Methods	Cell Lines^a	Incubation at 36°C	Stain used/Read
Lung^b Liver/Bone Marrow/Kidney/ Fetal Tissue	Shell Vial	MRC-5	2 days	CMV-IE
		MRC-5 (if requested)	1 day	HSV1
		MRC-5 (if requested)	1 day	HSV2
		MRC-5 (if requested)	2 days	VZV
	Tube	CMK ^b	14 days	3 x Reads/week ^b RS/HSV-bivalent
		HFF	14 days	3 x Reads/week
		RD	7 days	3 x Reads/week
Brain	Shell Vial	MRC-5	2 days	CMV-IE
		MRC-5	1 day	HSV-bivalent
		MRC-5	2 days	VZV
	Tube	CMK	14 days	3 x Reads/week
HFF		14 days	3 x Reads/week	
RD		7 days	3 x Reads/week	

^aMRC-5 = Human Fibroblast cells; CMK = Cynomolgus Monkey Kidney; HFF= Human Foreskin Fibroblast cells; RD = Rhabdomyosarcoma cells

^b CMK tube inoculated with **Lung tissue** should be **read** for 2 weeks **and** if no CPE is observed, **stain** a double Cytoprep with SimulFluor Respiratory virus Screen and HSV bivalent monoclonal antibody stains.

See Appendix II for detailed shell vial procedure.

See Appendix III for detailed tube culture procedure.

