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Section: <b>Virology Manual</b>	Subject Title: <b>Urine</b>	
Issued by: <b>LABORATORY MANAGER</b>	Original Date: March 14, 2001	
Approved by: Laboratory Director	Revision Date: October 10, 2003	

## URINE

### **I. Introduction**

Urine is the specimen of choice for neonates suspected of congenital cytomegalovirus (CMV) infection. Other viruses recovered from urine that may be representative of a systemic infection include enteroviruses, rubella, measles, and mumps. In addition, adenovirus may be cultured from urine specimens. If no virus is requested, urine specimens will be processed for CMV only. Additional cell lines or shell vials may be required if other specific viruses are requested. Refer to Appendix XV (Isolation and Identification) to ensure that the appropriate media is inoculated. Urine for which polyomavirus (BK or JC) is requested should be sent to the Public Health Laboratory (PHL) for electron microscopy.

### **II. Collection and Transport**

The first morning voided urine sample is best for recovery of CMV. Urine should be collected in a clean, sterile container. If a delay in transport or processing is anticipated, keep the sample at 4°C.

### **III. Procedure**

#### **A. Processing of Specimens:**

Do not freeze the urine before processing. Urine can be left at 4° C for no more than 48 hours before inoculation. A fresh specimen should be requested from patients for which a urine is received that cannot be set up within this time frame (i.e. Friday evening, long weekends).

- a) Gently mix and transfer 2 ml of urine to a sterile freezer vial. Add 4 drops gentamicin and 2 drops of fungizone to a final concentration of 100 µg/ml and 10 µg/ml respectively.
- b) Allow to stand at room temperature for 10 minutes before inoculating

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B. Direct Examination:

Not done.

D. Isolation and Identification:

<b>Method</b>	<b>Cell Lines<sup>a</sup></b>	<b>Incubation at 36°C</b>	<b>Stain<sup>b</sup> used</b>
Shell Vial	MRC-5	2 days	CMV-IE

<sup>a</sup>MRC-5 = Human diploid fibroblast cells

<sup>b</sup>CMV-IE= Monoclonal antibody IFA stain for CMV immediate early antigen

Refer to Appendix II for Shell Vial staining and interpretation.

**IV. Reporting Results**

Shell Vial:                      Negative Report:                      “Negative for Cytomegalovirus.”

   Positive Report\*:                      “POSITIVE for Cytomegalovirus.”

**\* Telephone all positive results to ward/ordering physician.**

\* When entering positive results in the Lab Information System (LIS), enter the virus name in the isolate window (under F7). See Appendix for entering LIS results.

**V. Reference**

1. Gleaves, Curt A. et al. Cumitech 15A “Lab Diagnosis of Viral Infections”. American Society for Microbiology, August 1994.