

## Mumps Specimen Collection Virginia Division of Consolidated Laboratory Services (DCLS)

Specimens for mumps testing are accepted at DCLS only after consultation with the health department. If mumps is suspected, please contact the local health department and ask for the communicable disease nurse or epidemiologist to obtain information about testing criteria, specimen collection, and transport. Information may also be obtained from the Virginia Department of Health Division of Immunization (phone 804-864-8055, Mon-Fri, 8 am to 5 pm).

### Limitations of laboratory testing for mumps

Mumps cannot be ruled out using laboratory test results. In the recent Midwest outbreak, mumps culture appeared to be positive in only about 10% of cases. Mumps RT-PCR testing appears to have a sensitivity similar to culture. The sensitivity and specificity of mumps serology tests have not been clearly defined; interpretation of results is difficult, especially in vaccinated individuals.

### Overview of mumps laboratory testing at DCLS/CDC

Specimen	When to Collect	Tests Performed	Lab
Serum, acute	When patient first seen with suspected mumps	Mumps IgM and IgG	CDC
Parotid secretions (buccal swab)	When patient first seen with suspected mumps, but only if specimen can be collected no later than 72 hours after onset of parotitis	Mumps RT-PCR	DCLS
Serum, convalescent	10 or more days after acute serum collection. Collect only if specimen is still needed for diagnosis.	Mumps IgM and IgG	CDC

### Mumps Specimen Collection Details (DCLS)

- **Serum:** Collect 7-10 ml of blood in a red top or serum separator tube (SST).
- **Parotid secretions (buccal swab):**
  1. Assemble the materials for virus culture collection provided in the DCLS Specimen Collection Kit for Virus Isolation which includes an instruction sheet named "Protocol for the Collection and Submission of Specimens for Isolation and Identification of Influenza and Other Viruses".
  2. Massage the parotid gland area (the space between the cheek and teeth just below the ear) for about 30 seconds prior to collection of the buccal secretions.
  3. Use a virus collection swab (polyester) to swab the buccal cavity (the space inside the mouth near the upper rear molars between the cheek and the teeth).
  4. Immediately place the buccal swab into the tube of viral transport medium and secure the screw-capped lid to prevent leakage.
  5. Ship to DCLS **on the same day** specimen is collected.
- **Label** each specimen tube with patient name, specimen type, and collection date.
- **Keep specimens refrigerated during storage and transportation.** (Include frozen cold packs in insulated shipping container to maintain refrigerated temperature.)
- Complete one DCLS reference request form (DGS-22-164) for each patient. On "Test Requested" line, write MUMPS. Check off specimen types submitted (for buccal swab, check "other" and write in "buccal swab").
- Follow protocols for shipping specimens to DCLS as described in DCLS virus isolation specimen collection kit.
- DCLS can be reached by pager (24/7) at 804-418-9923. After the pager's beep, enter your call-back telephone number including area code. If no response has been received within 15 minutes, telephone 800-283-8252 to speak with an operator.