



Quick Guide for Mumps Specimen Collection and Testing

The Centers for Disease Control and Prevention (CDC) recommends that a buccal/oral swab and blood specimen be collected from all patients with clinical features compatible with mumps. Depending on type & timing of initial specimens collected, additional specimens may be requested. For more detailed guidance or information on test result interpretation, please refer to the Mumps Laboratory Testing FAQs found at: <https://www.nj.gov/health/cd/topics/mumps.shtml>

Specimen Collection

Buccal/oral swab: the preferred specimen for reverse transcriptase polymerase chain reaction (RT-PCR) detection.

- **Collect** swab as soon as possible after parotitis onset. Most successful when specimens are collected within 3 days of parotitis onset; however, swabs may be positive in persons up to 14 days after parotitis onset.
- Use synthetic (non-cotton) swabs. Brands include Dacron® and Copan. This is the same type of swab used for influenza RT-PCR testing. *Massage the parotid gland area (the space between the cheek and teeth just below the ear) for about 30 seconds prior to collection.*
- Place swabs in 2-3 ml of standard, commercially available viral transport medium (VTM). Transport media with charcoal should *not* be used.
- Keep specimens cold (4°C) and ship using cold packs (4°C). If there is a delay in shipment, freezing specimen (-20°C or lower) may be recommended.

Serologic testing:

- Blood should be collected, ideally 3 days after parotitis onset.
- Collect 7-10 ml of blood in a red top or serum separator tube (red-speckled or gold).
- Keep specimens cold (4°C) and ship using cold packs (4°C). If there is a delay in shipment, freezing specimen (-20°C or lower) may be recommended.

Urine:

- Only in patients presenting with mumps complications (orchitis, oophoritis, nephritis, encephalitis, meningitis) and **without** parotitis or other salivary gland swelling, collect urine, oral specimen, and serum, regardless of days from onset.
- Collect a minimum volume of 50 ml of urine in a sterile container.
- Keep specimens cold (4°C) and ship using cold packs (4°C). If there is a delay in shipment, freezing specimen (-20°C or lower) may be recommended.

Specimen Testing

- Each specimen must be clearly labelled with the patient's name, date of birth, and date of collection.
- Mumps testing can be performed by commercial laboratories. Commercial laboratories have different testing capabilities based on specimen type; carefully check both the specimen type and the specific test to be requested.
- In certain circumstances, testing may be available at CDC or Wadsworth (CDC viral reference laboratory):
 - Approval is **required** by NJDOH prior to submission and should be coordinated through the LHD. Once submission is approved, the LHD can also assist with coordination of transport to Public Health and Environmental Laboratory (PHEL).
 - In [PHEL's Online Ordering Portal](#), search for "Reference Laboratory Test Request", select "Other" under test type and enter "Mumps PCR testing"; select appropriate specimen type; and select appropriate reference laboratory location. Print requisition form and include with sample in shipment to PHEL. Incorrectly labeled specimens submitted to PHEL will be rejected.
 - If online ordering is not available, a completed [SRD-1](#) form must accompany the specimens sent to PHEL. In "Tests Requested" section of the form, indicate "Reference Laboratory" and write in "CDC/Wadsworth".
 - Turnaround time for specimens sent to CDC/Wadsworth is approximately 1-2 weeks depending on collection timing and transportation. NJDOH will provide results to the LHD when they are available.

In accordance with N.J.A.C. 8:57, mumps is reportable **within 24 hours of diagnosis** and should be reported to the LHD in the jurisdiction in which the patient resides.

Directory of LHDs in New Jersey available at: <https://www.nj.gov/health/lh/>

If unable to reach the LHD, please contact the NJDOH at 609-826-5964 during regular business hours.