
Lab Dept: Microbiology/Virology

Test Name: MUMPS PCR (MDH)

General Information

Lab Order Codes: MVPM

Synonyms: Mumps virus RNA PCR

CPT Codes: 87798 – Infectious agent detection by nucleic acid (DNA or RNA), not otherwise specified; amplified probe technique, each organism

Test Includes: Mumps RNA RT-PCR. Culture may be done on a specimen with negative PCR results.

Logistics

Test Indications: Mumps is characterized by:

- Non-specific prodrome including myalgia, anorexia, malaise, headache, and low-grade fever.
- Acute onset of unilateral or bilateral tender swelling of the parotid or salivary gland lasting 2 or more days without other apparent cause.

Mumps should be considered in the differential diagnosis of patients presenting with parotitis or swelling of the salivary glands, regardless of vaccination history.

Mumps Real-Time Polymerase Chain Reaction (RT-PCR, or PCR) is available for mumps case confirmation at the MDH Public Health Laboratory (MDH-PHL). Providers are asked to collect and send a PCR specimen to MDH-PHL when mumps is suspected. A clinical specimen for PCR should be taken as soon as mumps is suspected. Viral RNA is more likely to be detected when the specimen is collected as soon as possible after parotitis (or other symptom) onset. Ideally, a specimen for mumps PCR should be obtained within 0-3 days of parotitis onset (0-9 days at most). Consider the parotitis (or other symptom) onset date as day '0'.

Mumps is a reportable disease. Report suspect cases of mumps immediately to the Minnesota Department of Health. MDH can facilitate testing and exposure follow-up. Call 651-201-5414 or toll-free 877-676-5414.

Lab Testing Sections: Microbiology/Virology - Sendouts

Referred to: Minnesota Department of Health (MDH)

Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Specimens accepted daily, 24 hours
Turnaround Time:	PCR results are reported within 2 - 7 days; Culture, if performed, is reported at a minimum of 3 weeks or more.
Special Instructions:	Do not use: wood-tipped applicators; calcium-alginate tipped swabs; charcoal swabs; gel swabs; anaerobic media Collect specimens for PCR as soon as mumps is suspected (maximum 9 days after swelling onset). Consider day 0 as swelling onset date. See Specimen Type : for specimen preference.

Specimen

Specimen Type:	Day 0-5 of swelling: buccal swab preferred Day 6-9 of swelling: buccal swab and urine preferred See Special Instructions :
Container:	Urine: Sterile screw cap container Buccal/Throat: Swab transport system
Volume:	Urine: 10 mL
Collection:	Buccal swab: Massage the buccal cavity (the space near the upper rear molars between the cheek and the teeth) for 30 seconds and swab the area with a BBL Culture Swab, Culturette, or Dacron swab; obtain a generous amount of saliva. Place swab in transport medium and send to the lab immediately. Urine specimen: Collect 10-40 mL of urine in a sterile urine specimen container. First-morning voided specimens are ideal, but any urine collection is adequate. Have patient void directly into container, collecting from the initial stream of urine if possible. Throat swab (acceptable but not preferred): Vigorously swab tonsillar areas and posterior nasopharynx with a BBL Culture Swab, Culturettes, or Dacron swabs. Use tongue blade to depress tongue to prevent contamination of swab with saliva. Place swab in transport medium and send to the lab immediately.
Special Processing:	Lab Staff: Label tubes/containers with patient name, date of birth, date collected and specimen type.

Swabs: Place into Viral transport medium (VTM), Universal transport medium (UTM), M5, M4, Minimum Essential Medium (MEM), Saline, Balanced salt solutions (BSS), Sterile isotonic solutions, Phosphate buffered salines (PBS), or Liquid Stuart's Medium.

Swabs and Urine should be kept and transported at refrigerated temperature (2 - 8° C). **Send within 24 hours of collection.**

Fill out and include project #955 on the Infectious Disease Testing and Submission Form [MDH Submission Form](#). Each specimen requires its own form.

Send to MDH Public Health Laboratory with daily courier or call immediate courier if specimen stability dictates faster delivery is required:

MDH Public Health Laboratory
Attn: Biological Accessioning
601 Robert St. N.
St. Paul, MN 55155-2531

Transport/Storage: Transport to the Laboratory immediately to maintain specimen integrity.

Sample Rejection: Specimen not submitted in appropriate transport container; dry swabs; improperly labeled specimen; insufficient volume; leaking or non-sterile containers.

Interpretive

Reference Range: RNA not detected

Critical Values: N/A

Limitations: N/A

Methodology: Reverse Transcription Polymerase Chain Reaction (RT - PCR)

References: [List of Tests - MN Dept. of Health \(state.mn.us\)](#)

[Mumps Information For Health Professionals - MN Dept. of Health \(state.mn.us\)](#) June 2023

Updates: 6/19/2023: Amended preferred specimen types, added acceptable swab and media types, added turnaround time for culture (if applicable), updated links.