



Missouri Department of Health and Senior Services

P.O. Box 570, Jefferson City, MO 65102-0570 | Phone: 573-751-6400 | FAX: 573-751-6010
RELAY MISSOURI for Hearing and Speech Impaired and Voice dial: 711



Sarah Willson
Director

Mike Kehoe
Governor

Missouri State Public Health Laboratory

Mumps Virus Information

Updated May 2025

Instructions for the collection and submission of mumps specimens for Real-Time RT-PCR testing at the Missouri State Public Health Laboratory

The Missouri State Public Health Laboratory (MSPHL) provides laboratory testing services for accurate diagnosis of Mumps Virus in individuals suspected of infection.

For general information on mumps virus, please refer to the CDC's mumps website at:

<https://www.cdc.gov/mumps/about/index.html>

IMPORTANT: Consultation with the Bureau of Communicable Disease Control and Prevention (BCDCP) is required prior to specimen collection or submission. You may contact BCDCP at 573-751-6113 during business hours or 800-392-0272 (24/7).

After contacting BCDCP (see above) and receiving testing approval, the samples should be collected in the manner outlined below and placed in an appropriate biosafety shipping container. Collection and shipping materials are provided by the Missouri State Public Health Laboratory and are available upon request once approval for testing has been granted.

SPECIMEN COLLECTION

Buccal swabs in viral transport medium are the required specimen type for mumps PCR testing. Detection of mumps RNA is most sensitive when specimens are collected within the first 1-3 days of parotitis onset (but not after 9 days of parotitis onset).

Once testing approval has been obtained from BCDCP, collect specimens as soon as possible after illness onset using the following criteria:

PROMOTING HEALTH AND SAFETY

The Missouri Department of Health and Senior Services' vision is optimal health and safety for all Missourians, in all communities, for life.

When collecting specimen (preferably within 72 hours of symptom onset), collect the following:

1. Buccal Swab

- Use **only** sterile Dacron, Nylon, Polyester, or flocked swabs with plastic shafts.
- Massage the parotid gland area just in front of the ear and near the angle of the jaw for 30 seconds prior to collecting secretions on the swab
- Collect fluid by swabbing the buccal cavity (the space between the cheek and gums). Sweep the swab near the upper molar to the lower molar area
- Immediately place swab into screw-capped vial of viral transport media (VTM), breaking off the end of the swab to ensure proper closure of the specimen vial

For ALL specimens collected please ensure the following:

- Information on the specimen container must match the information on the test request form. Label each specimen container with the following:
 - Patient name
 - Specimen Type
 - Date of Birth
 - Collection Date
- Refrigerate (2-8°C) samples immediately after collection

For Serology testing, please note:

Serology samples are referred to the Centers for Disease Control and Prevention for testing. Please contact the Virology Unit at the MSPHL by calling 573-751-3334 for the latest guidance on collection and shipping requirements before collecting samples.

TEMPORARY STORAGE OF SPECIMENS

Specimens should be shipped to the Missouri State Public Health Laboratory as soon as possible.

- Store the specimen at refrigerator temperature (2-8°C) pending shipment.
- If specimens will not be received by the MSPHL within 72 hours of collection, they should be stored frozen ($\leq -20^{\circ}\text{C}$).

SPECIMEN SUBMISSION

- Complete a separate MSPHL Test Request Form (TRF) for each specimen using one of the following options:
 - Electronic submission using Lab Web Portal
 - Contact us for registration information
 - Manual (paper) Test Request Form
 - Available online at <https://health.mo.gov/lab/pdf/Virology.pdf>
- The TRF should include the following information at a MINIMUM:
 - In the “MOLECULAR (PCR)” section of the TRF, select the “Mumps” box
 - Select the specimen type in the “Specimen Information” section
 - Collection date
 - Patient first and last name
 - Patient DOB
 - Submitting facility name and contact information
 - Date of symptom onset
 - Although not required, any additional patient demographic information that is available is helpful
- Specimens should be shipped to the MSPHL as soon as possible on freezer packs. Freezer packs should be stored in freezer for at least 24 hours prior to shipping.
- If specimens will not be received to the MSPHL within 72 hours of collection, specimens should be stored frozen ($\leq -20^{\circ}\text{C}$) and shipped on dry ice.

SHIPPING INSTRUCTIONS

The MSPHL will provide all shipping materials and cover shipping costs. Please contact the MSPHL to have collection kits sent to your facility.

****Please only use these collection kits for Mumps specimens****

Specimens may be sent to the MSPHL via the MSPHL Courier System. If utilizing the MSPHL Courier, samples should be sent out **no later than** the Friday courier pickup each week.

[GIS map of courier drop off locations Monday-Friday](#)

[List of courier drop-off locations by county Monday-Friday](#)

[Sunday Courier Locations](#)

If you do not have access to the MSPHL Courier, samples may be sent via FedEx. If utilizing FedEx for sample submission, ensure they are sent by priority shipping for receipt within 24 hours and that they will not arrive in Jefferson City on Saturday, Sunday, or a holiday.

DO NOT SHIP CLINICAL SPECIMENS VIA UPS

Please send all specimens to this address:

Missouri State Public Health Laboratory
ATTN: Molecular Unit
101 North Chestnut Street
Jefferson City, MO 65102
Phone# 573-751-3334, Option 2

HAVE QUESTIONS OR NEED ASSISTANCE?

Melissa Markham
Laboratory Supervisor, Molecular Unit
Missouri State Public Health Laboratory
Missouri Department of Health and Senior Services
Melissa.Markham@health.mo.gov

Joshua Featherston
Unit Chief, Molecular Unit
Missouri State Public Health Laboratory
Missouri Department of Health and Senior Services
Joshua.Featherston@health.mo.gov