



# GUIDANCE FOR MUMPS LABORATORY TESTING

Since acute parotitis can be caused by other etiology including some viral infections, such as enterovirus, parainfluenza, Epstein-Barr virus (EBV), adenovirus and influenza, all patients with suspected mumps need to get **Mumps-Specific Testing** and the **Full Respiratory Panel**.

## Mumps-Specific Testing:

Real-time RT-PCR (qRT-PCR) on buccal swabs or urine for mumps virus RNA detection.

Serology testing on serum for IgM and IgG antibodies to the mumps virus detection.

Test Request	Sample Type	Collection Kit	Store and Shipping Condition
Mumps qRT-PCR	Buccal swab* (up to 9 days from symptom onset)	AllTM or VTM or UTM	Store @ 4°C and ship on ice pack for arrival at the lab within 2 days from collection. Otherwise, freeze at -70°C and ship frozen on dry ice.
Mumps qRT-PCR	Urine (up to 14 days from symptom onset)	Sterile container (10-50 ml)	Store at 4°C and ship on ice pack. Do not freeze urine.
Mumps IgG and IgM	Serum (>3 days after symptom onset)	SST (red-top tube)	Store @4°C and ship on ice pack for arrival at the PHML within 3 days of collection. Otherwise, freeze (-20°C or below) and ship frozen on dry ice.

**\* qRT-PCR on buccal swab has the greatest diagnostic sensitivity when collected within 3 days of symptom onset. Specimens collected later will still be accepted, however the assay sensitivity will not be optimal.**

## **Sample Collection:**

1. Buccal swab collection:
  - a. Massage the parotid gland area (the space between the cheek and teeth just below the ear) for 30 seconds.
  - b. The parotid duct (Stensen's duct) drains in this space near the upper rear molars. Put the swab into that space. (For a video on collection, click this link from the CDC [Collecting a Buccal Swab Clinical Specimen for Mumps Diagnostic](#))
2. Urine: provide 10-50 mL in a sterile container, it is preferable to have the urine from the morning with the first micturition.

## **Full Respiratory Panel: (order as part of the differential)**

Nasopharyngeal (NP) and /or oropharyngeal (OP) swab in AllTM or VTM or UTM

## **References:**

1. <https://www.cdc.gov/mumps/lab/specimen-collect.html> (accessed on Dec. 01 2022)
2. <https://cnphi.canada.ca/gts/reference-diagnostic-test/5038?alphaReturn=pathogenBvLetter&alphaChar=> (accessed on Dec. 01 2022)

