Saliva Sample Collection for SARS-CoV-2 testing

The Wyoming Public Health Laboratory utilizes the SalivaDirect assay which has emergency use authorization by the US Food and Drug Administration.

Important notes on saliva collection

- The patient should only remove their mask when ready to pass their sample into the collection tube, replacing it immediately after sample collection.
- The sample collector (the individual assisting with the collection of saliva) must maintain 6 feet of distance from the individual providing the sample.
- SalivaDirect tests the saliva that is normally present in the mouth.
- Samples should be clear to white in color.
- Coughing or sniffing before or during sample collection must be avoided.
- Do not use the word ‘spit’ as this is an action that must be avoided.
- Words such as ‘dribbling’ or ‘drooling’ better describe the process.
- Saliva should instead be gently expelled from the mouth into the collection tube.
- No water should be consumed by the patient for at least 10 minutes prior to collection.
- Other drinks, food, smoking, nasal sprays, teeth cleaning and chewing gum should be avoided for at least 30 minutes before sample collection.
  - If needed, have the patient take a drink of water to clean out their mouth and then wait 10 minutes before proceeding with collection.

The saliva sample collection kit:

The saliva collection kit contains:
- A barcoded tube
- A cap for the barcoded tube
- A funnel to make collection of saliva easier

The funnel should be placed on the barcoded tube prior to sample collection.
How to collect a saliva sample:

1. Prior to sample collection, obtain a saliva collection kit.
2. Order the SARS-CoV-2 test in the WPHL Laboratory Web Portal. The barcode on the saliva sample tube replaces the need for a label.
3. The sample collector can encourage saliva production by telling the patient to think about food (favorite foods, upcoming meals, something sour etc.). Even just thinking about the saliva collection itself can help to stimulate production.
   a. Thinking about this while preparing to collect the sample can help ensure enough can be pooled in the mouth quickly and easily.
4. The funnel should be placed on the top of the barcoded tube.
5. The sample collector will ask the sample provider to remove one side of their mask.
6. The patient will remove the lid of the collection container and gently expel saliva through the funnel into the collection tube until at least 0.5 mL has been collected.
   a. The total volume measured is to exclude any bubbles.
   b. Reminder: this is the collection of normal saliva, sniffing or coughing up deeper material must be avoided.
7. If the patient is struggling to produce a sample, have them close the tube, replace their mask and take a few minutes to relax and pool more saliva into their mouth, before trying again.
8. If anything other than saliva is collected (e.g. mucus, a lot of food particles), dispose of the sample in a sealed biohazard bag in a biohazard container, wait a few minutes and start the process again.
9. The sample collector must clean their hands using alcohol-based sanitizer or soap and water.
10. The funnel should be removed and discarded. The cap should then be placed on the tube and tightened to ensure no leakage of the specimen during transport.
11. Sterilize the collection tube with 70% ethanol or a disinfecting wipe.
12. Place the capped saliva sample tube in a biohazard bag for transport to WPHL.
13. The sample should then be send specimen to WPHL at room temperature. Viral RNA in saliva will remain stable at room temperature for at least 7 days.
14. Samples can be stored at 2-8°C until transport or processing (up to 7 days) or at -80°C for long term storage or if transport is delayed.
Important notes about the saliva sample collection kit:

1. Saliva sample tube must be filled to the black line with no visible bubbles below it. See image below.

2. Barcodes or labels from your laboratory CANNOT cover up the barcode on the saliva sample tube. The barcode on the saliva sample tube replaces the need for a label with the patient’s name and date of birth. See image below.