



COVID-19 Antigen Testing Biosafety Guidance

The following document describes recommended biosafety practices to protect personnel and the work area from contamination with Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) when collecting and testing specimens for coronavirus disease 2019 (COVID-19) using an antigen test (ex. BD Veritor™, Quidel Sofia™ or Abbott BinaxNOW™). Personnel involved in providing biosafety guidance should always consider how to minimize risk of contamination and transmission to other personnel and building occupants. **Each facility should perform its own site specific risk assessment based on their facility needs to determine whether enhanced safety precautions are warranted.** APHL recommends that facilities refer to the Centers for Disease Control and Prevention (CDC) [Guidance for SARS-CoV-2 Point-of-Care Testing](#), [Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019](#) and [Guidance for General Laboratory Safety Practices during the COVID-19 Pandemic](#) for additional information. Please refer to the [APHL Considerations for Implementation of SARS-CoV-2 Rapider Antigen Testing](#) for an overview on SARS-CoV-2 rapid antigen tests and the [APHL Biosafety and Biosecurity website](#) for additional resources on laboratory biosafety and biosecurity best practices.

Specimen Collection

- Specimen collection and handling presents the greatest risk to personnel. Proper training and use of personal protective equipment (PPE) is very effective in reducing risk.
- If possible, have patient self-collect nasal swab to minimize the use of PPE and the risk to personnel.
 - ◊ If patient can self-collect, personnel should remain >6ft. away and wear gloves when handling specimens.
 - ◊ If patient is unable to self-collect, CDC recommends that personnel maintain proper infection control practices and use recommended PPE, which includes an N95 or higher-level respirator (or facemask if a respirator is not available), eye protection, gloves, and a gown, when collecting specimens.
- If the swab is collected away from the testing location, patient or testing personnel should place the swab back into sterile packaging, then into a re-sealable plastic zipper bag, and seal. Be careful not to contaminate exterior of bag.
 - ◊ Change gloves after handling materials that could be contaminated, and prior to touching any commonly touched surfaces like doorknobs, light switches, railings, counter tops, the primary work surface, or the test instrument to decrease the risk of cross-contamination and false positive antigen test results.
 - ◊ Do not seal any accompanying paperwork (i.e. requisitions) with the specimen inside a zipper bag.

Specimen Testing

Engineering Controls

- Select a testing location away from high-traffic areas that is accessible by authorized personnel only.
- It is recommended that this procedure be performed using a biosafety cabinet/hood. This is preferable when working in a laboratory, but the test can be performed safely without a biological safety cabinet/hood by using good biosafety practices and using the recommended guidance below along with alternative physical barriers such as a splash shield.

Administrative Controls

- Clean the area with an Environmental Protection Agency (EPA)-registered disinfectant from [List N: Disinfectants for Coronavirus \(COVID-19\)](#). Follow the manufacturer's recommendations for use, such as dilution, contact time, and safe handling.
- Change gloves frequently and especially between patient specimens and prior to touching commonly touched surfaces.
- Test procedures should be performed on a hard, non-porous work surface that can be easily cleaned and disinfected after use. This surface should be covered by an absorbent material, like a paper towel or absorbent pad, during testing to catch potential droplet contaminants.
- When removing swab from plastic zipper bag and packaging, be cautious to minimize contamination.
- Take caution when rolling swab against the inside of the reagent tube (ex. Quidel Sofia™) or swirling swab/squeezing the tube (ex. BD Veritor™). Use slow and deliberate motions to prevent

- agitation, keep swab as deep inside the tube as possible to reduce the likelihood of flicking the tube contents out the tube. Hold the tube firmly so it doesn't spill or you risk dropping.
- Dispose of Test Cassette and swab in a properly marked biohazardous waste container. A sharps container is recommended/preferred since swabs can sometimes pierce through a standard waste bag. All waste should ultimately be disposed of as regulated medical waste in accordance with local regulations.
- Discard used Test Cassette in a properly marked biohazardous waste container and immediately change gloves.
- After each test, change gloves and decontaminate work surface and test instrument with an Environmental Protection Agency (EPA)-registered disinfectant from [List N: Disinfectants for Coronavirus \(COVID-19\)](#).
- All waste should ultimately be disposed of as regulated medical waste in accordance with local requirements.
- After testing is complete and the work area has been cleaned and decontaminated, remove PPE in a way that minimizes contamination of your clothing and skin."
- Thoroughly wash hands with soap and water for at least 20 seconds or perform alternate hand hygiene.

Personal Protective Equipment

- The minimal recommended PPE when performing antigen testing: gloves, gown/lab coat, mask, and face shield or goggles.