

Standard Operating Procedure

Buccal sample collection, storage and use

Purpose: To collect buccal epithelial cells as test samples for assay development.

Risk assessment

The risk of contracting an infection from buccal samples is low. However, safe handling and the use of proper protective equipment will lower this risk further. The most probable infectious agents that can be communicated from the mouth include rhinovirus, influenza virus, Epstein-Barr virus, Type 1 herpes, Strep bacteria, hepatitis B and hepatitis C, and cytomegalovirus. Good laboratory practice should be followed. The buccal sample is therefore Biosafety Level I.

MATERIALS AND EQUIPMENT

- Individually packaged sterile cotton swabs
- 15 ml centrifuge tubes
- Microcentrifuge tubes
- Micropipette and tips

PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CONTAINMENT

PPE such as lab coats and gloves must be worn at all times in the laboratory. Masks in combination with goggles or glasses with solid side shields should be worn whenever eye contamination is reasonable anticipated.

Sample collection

1. Participants volunteer by contacting a designated member of the lab. Recruited participants consent to all procedures on themselves as well as the samples.
2. Individually packaged sterile cotton swabs will be used to minimize the risk to the participant. Participant will open the package and use the swab to scrape the inside of the cheek.
3. Participant will air-dry the swab by swinging it gently for 5 minutes.
4. Participant will then place swab in 15 ml centrifuge tube.

HANDLING AND STORAGE

1. Handle as if capable of transmitting a disease. Wash hands with soap and water after handling buccal sample. Do not eat, drink, smoke, apply cosmetics, or handle contact lenses when working with this material. All procedures involving this product must be done in ways that minimize splashing, spraying, splattering, and generation of droplets.
2. Containers must be sealed when not in use. Store at 4 °C.

Using samples in experiments

1. Pipette 400 µl nuclease-free sterile distilled water (NF water) in 1.5 ml centrifuge tube (ClickFit Forensic grade, Promega)
2. Place swab in water, agitate for minimum 5 minutes
3. Place swab head in spin basket (snap off swab head)
4. Insert spin basket in centrifuge tube
5. Spin 12000 rpm 5 minutes
6. Remove 350 µl supernatant, Add 350 µl NF water. Washed buccal epithelial cells are now ready to use in experiments.

Disposal and decontamination

Disinfect supernatant with 10% bleach. Discard used swabs, all tubes and pipette tips as biohazardous waste. Wipe down all surfaces including pipette using 70% ethanol.

ACCIDENTAL SPILL/RELEASE MEASURES

1. Wear PPE when cleaning up spills. Collect spills with absorbent disposable towels. Dispose towels in biological waste and spray down surface with 70% ethanol.