

Product Sheet

OmniSwab, Sterile

Contents

OmniSwab, Sterile	100 pieces
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Description

The OmniSwab (cat. no. WB100035) is a single-use sterile, buccal cell collection swab used in forensic databasing and criminal reference sample collection. The OmniSwab includes an ejectable brush-like swab head that enables efficient oral sampling and facilitates DNA extraction directly from the pad. OmniSwabs are individually packaged in a clean room environment and sterilized by gamma irradiation.

The Sterile OmniSwab is designed for the collection of buccal cell samples for DNA testing. To obtain a buccal cell sample, the pad end of the OmniSwab is rubbed against the inside of the cheek. Unlike cotton-tipped swabs, the OmniSwab is made of an absorbent material designed for the collection of buccal cells. The single-use swab has a unique removable collection pad and ejector to assist in processing the sample (Figure 1). While collecting a buccal sample is quick, easy, and painless, it still needs to be done correctly.



Figure 1. OmniSwab, Sterile.

Shipping and Storage

The OmniSwab, Sterile, is shipped at room temperature (15–25°C). Store unused swabs in original packaging in a cool, dry, clean environment. After collecting samples, allow them to dry, and then store securely at room temperature in a dry environment, away from food or feedstock. When stored correctly, the OmniSwab is good until the expiration date printed on the kit box lid.

Symbols

	Catalog number
	Lot number
	To be used by
	Temperature limitations
	Legal manufacturer

Quality Control

In accordance with QIAGEN's ISO-certified Quality Management System, each lot of the OmniSwab, Sterile, is tested against predetermined specifications to ensure consistent product quality.

Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate safety data sheets

(SDSs). These are available online in convenient and compact PDF format at www.qiagen.com/safety, where you can find, view, and print the SDS for each QIAGEN kit and kit component.

Using the OmniSwab for Buccal Cell Collection

Procedure

The following directions are provided to illustrate an acceptable collection protocol. Each facility should establish a sample collection protocol that meets the objectives of collection and testing facilities.

Sample collection

1. The person providing the buccal cell samples should not eat or drink immediately prior to giving the sample. If food or drink has been recently taken, it is suggested that the mouth be rinsed with water prior to sampling.
2. The person taking the samples should wear biohazard-barrier gloves and avoid contact with the OmniSwab collection pad.
3. Open the OmniSwab packaging at the handle end and carefully remove the swab.
Note: Do not touch the collection pad of the swab.
4. Holding the handle end of the OmniSwab, scrape the collection pad firmly against the inside of the cheek 5–6 times (for around 10 s) being careful not to eject the tip (see Figure 2).

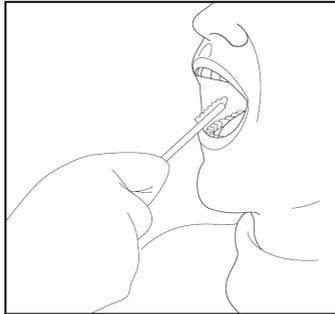


Figure 2. Sample collection

5. After taking the sample, push the ejector to release the collection pad into a labelled 2 ml microcentrifuge tube.
6. If desired, repeat sampling procedure with a second swab using the other cheek. Eject the collection pad into a different labelled 2 ml microcentrifuge tube.
7. After sample collection, the pad can be kept at room temperature when processed immediately. If storage is necessary, freeze collection pads at -30 to -15°C .

Sample processing

Extracting purified DNA directly from the ejectable OmniSwab collection pad is possible using the QIAamp® DNA Mini Kit (cat. no. 51304 or 51306) by following the protocols below.

Note: Optionally, the QIAamp DNA Investigator Kit (cat no. 56504) for purification of DNA from forensic and human identity samples can be used; kits meet ISO 18385:2016 requirements.

DNA extraction

1. Preheat a water bath to 56°C .
2. Remove the OmniSwab from the freezer and allow to defrost (approximately 30 min).

3. Add 600 μl of PBS buffer to a 2 ml tube (tubes included in the QIAamp DNA Mini Kit) containing the OmniSwab.
4. Add 20 μl of QIAGEN[®] Protease Solvent (cat. no. 1021055) to the tube, followed by 600 μl of Buffer AL (included in QIAamp DNA Mini Kit). Mix immediately by vortexing for 15 s.
5. Incubate at 56°C in the water bath for 10 min.
6. Add 600 μl of ethanol (96–100%) to the tube and mix by vortexing. Briefly centrifuge to remove drops from inside the lid.
7. Carefully transfer 700 μl of mixture from step 6 to a QIAamp Mini Spin Column (included in QIAamp DNA Mini Kit) without wetting the rim. Close the cap and centrifuge at 6000 $\times g$ (8000 rpm) for 1 min. Place the QIAamp Mini Spin Column in a clean 2 ml collection tube and discard the tube containing filtrate.
8. Repeat step 7 transferring the 700 μl of solution to the same spin column.
Note: there may be a small amount of solution left in the tube containing the swab - this can now be discarded.
9. Add 500 μl of Buffer AW1 (included in QIAamp DNA Mini Kit) to the QIAamp Mini Spin Column without wetting the rim. Close the cap and centrifuge at 6000 $\times g$ (8000 rpm) for 1 min. Place the QIAamp Mini Spin Column in a clean 2 ml collection tube and discard the tube containing the filtrate.
10. Add 500 μl of Buffer AW2 (included in QIAamp DNA Mini Kit) to the QIAamp Mini Spin Column without wetting the rim. Close the cap and centrifuge at full speed (20,000 $\times g$; 14,000 rpm) for 3 min.
11. Place the QIAamp Mini Spin Column in a clean 1.5 ml microcentrifuge tube and discard the collection tube containing the filtrate.
12. Add 150 μl of Buffer AE (included in the QIAamp DNA Mini Kit) directly to the matrix and incubate at room temperature for 1 min. Centrifuge at 6000 $\times g$ (8000 rpm) for 1 min.
13. Discard the spin column and seal the tube containing DNA. Store at 4°C for up to 1 month or at –30 to –15°C for long-term storage.

Direct PCR

For direct PCR amplification, the Investigator STR GO! Lysis Buffer (cat. no. 386516) is recommended. To use the kit, carefully follow the protocol below.

Note: If an alternative PCR chemistry is desired, please refer to its instruction manual and follow all manufacturer recommendation.

Note: The protocol below has been taken from QIAGEN's Investigator 24plex GO! Handbook, under "Protocol: PCR amplification from Buccal Swab Lysates".

1. Place the OmniSwab in a 2 ml microcentrifuge tube.
2. Add 500 µl of Investigator STR GO! Lysis Buffer to the sample.
3. Incubate at 95°C for 5 min shaking at 1200 rpm in a thermomixer.
4. **Optional:** Incubate at room temperature for 5 min shaking at 1200 rpm in a thermo mixer.
5. Prepare a master mix (composed of 7.5 µl Fast Reaction Mix 2.0 and 12.5 µl Primer Mix).
6. Vortex the reaction mix thoroughly, and dispense 20 µl into PCR tubes or the wells of a PCR plate.
7. Mix the swab lysates thoroughly, spin down shortly and transfer 2 µl of swab lysate directly to each reaction.

Note: From step 7 onwards, please refer to QIAGEN's Investigator 24plex GO! Handbook, under "Protocol: PCR amplification from Buccal Swab Lysate", and follow from the thermal cycler temperature instruction table (Table 9, page 23).

8. After the cycling protocol is complete, store samples at -30 to -15°C protected from light, or proceed directly with electrophoresis.

Ordering Information

Product	Contents	Cat. no.
OmniSwab, Sterile	100 pieces	WB100035
Related products		
Indicating Desiccant Pack	Desiccant packets (1 g) with indicator to ensure that FTA Cards remain dry during transport or storage. A color change from blue to pink indicate absorption of moisture.	WB100003
Multi Barrier Pouch Clear 3.75" x 3"	100 pouches (3.75 x 3 inch/9.5 x 7.6 cm)	WB100089
Multi Barrier Pouch 3.75" x 3"	100 pouches (3.75 x 3 inch/9.5 x 7.6 cm)	WB100036
Multi Barrier Pouch 4.37" x 6.5"	100 pouches (4.37 x 6.5 inch/11.1 x 16.5 cm)	WB100037
QIAGEN Protease Solvent	6.0 ml	1021055
QIAamp DNA Mini Kit (50)	For 50 DNA preps: 50 QIAamp Mini Spin Columns, QIAGEN Proteinase K, Reagents, Buffers, Collection Tubes (2 ml)	51304
QIAamp DNA Mini Kit (250)	For 250 DNA preps: 250 QIAamp Mini Spin Columns, QIAGEN Proteinase K, Reagents, Buffers, Collection Tubes (2 ml)	51306
QIAamp DNA Investigator Kit	For 50 DNA preps: 50 QIAamp MinElute Columns, Proteinase K, Carrier RNA, Buffers, Collection Tubes (2 ml)	56504
Investigator STR GO! Lysis Buffer (200)	100 ml lysis buffer for 200 swab samples	386516

Product	Contents	Cat. no.
Collection Microtubes (1.2 ml)	Nonsterile polypropylene tubes (1.2 ml), 960 in racks of 96	19560

OmniSwab, Sterile, is intended for molecular biology applications. This product is not intended for the diagnosis, prevention, or treatment of a disease.

All due care and attention should be exercised in the handling of the products. We recommend all users of QIAGEN® products to adhere to the NIH guidelines that have been developed for recombinant DNA experiments, or to other applicable guidelines.

Document Revision History

Date	Changes
06/2021	Initial revision

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