

Contact/Trace DNA Collection and Preservation

Humans shed tens of thousands of skin cells each day and these cells may be transferred to a surface by the suspect in a crime. The following list shows some common sources of contact/trace (sometimes referred to as “touch”) DNA evidence:

- Weapons: handle of a baseball bat, knife, or hammer, etc.
- Tools used to gain entry: pry bar, bolt cutters, screwdriver, etc.
- Vehicles: steering wheel, gear shift, door handle of vehicle.

Procedure for Contact/Trace DNA Collection – 2 swab technique

1. Wear proper personal protective equipment: gloves are required (change frequently) and a facemask is highly recommended. Avoid talking over, sneezing on, chewing gum over, smoking over, or handling the area to be swabbed.
2. Remove a sterile cotton-tipped swab from the sealed package
3. Place a few drops of clean/sterile water on the cotton tip (avoid saturating the swab)
4. Swab the area of suspected DNA by rotating the swab so the entire surface of the swab is used
5. Re-swab the area with a dry sterile swab (use each swab only once)
6. Place the 2 swabs together in a breathable swab box. Label the box with the specific area that was swabbed.
7. Place the labeled box into an evidence envelope and label the envelope with the location swabbed. Seal the envelope with evidence tape. Place your initials, DSN and the date on the evidence tape seal.
8. Follow the [Buccal swab procedure](#) to collect buccal swab reference standards from any victims/witnesses/owners who may have DNA present on evidence. (Example: owner of a recovered stolen vehicle where swabs of the steering wheel, gear shift, door handles etc. are taken. The owner’s DNA needs to be eliminated as a possible source of evidence profiles)

The following table is the suggested short term storage conditions for evidence

Table III-I: Short-Term Storage Conditions Matrix¹

Photo Credit: NIJ Biological Evidence Preservation Handbook

Type of Evidence ²	Frozen	Refrigerated	Temperature Controlled	Room Temperature
Liquid Blood ³	Never	Best	Less than 24 hours	
Urine	Best	Less than 24 hours		
Dry Biological Stained Item ⁴			Best	Acceptable
Wet Bloody Items (if cannot be dried)	Best	Acceptable	Less than 24 hours	
Bones	Acceptable		Acceptable	Acceptable
Hair			Best	Acceptable
Swabs with Biological Material		Best (wet)	Best (dried)	
Vaginal Smears			Best	
Feces	Best			
Buccal Swabs			Best	Less than 24 hours

- **frozen:** temperature is maintained thermostatically at or below –10 °C (14 °F)
- **refrigerated:** temperature is maintained thermostatically between 2 °C and 8 °C (36 °F and 46 °F) with less than 25 % humidity
- **temperature controlled:** temperature is maintained thermostatically between 15.5 °C and 24 °C (60 °F to 75 °F) with less than 60 % humidity
- **room temperature:** temperature is equal to the ambient temperature of its surroundings; storage area may lack temperature and humidity control methods