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## SPRING STUDY

**Full Title: Severe acute respiratory-syndrome related coronavirus 2 prevalence in children and young adults in British Columbia: an observational study**

# **DRIED BLOOD SPOT (DBS) SAMPLE COLLECTION VIA FINGER PRICK**

## **INSTRUCTION MANUAL**

Please read the instructions carefully. You can visit our study webpage at <https://bcchr.ca/vec/research/spring-study> for more details.

If you have any questions or concerns, please contact us:

**604-875-2187**

**[springstudy.vec@bcchr.ca](mailto:springstudy.vec@bcchr.ca)**

*Note for parents/legal guardians: if you are helping your child to collect a finger-prick blood sample, please clean your hands and guide your child through the steps in this manual.*

**Check that you have the following items from the kit to do the dry blood spot (DBS) test:**

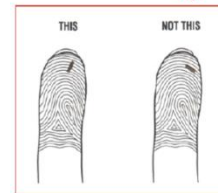
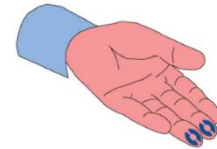
- 1 blood spot card
- 2 lancets: If you are unsuccessful at your first attempt, you could use the second lancet
- 1 alcohol swab
- 2 sterile gauze
- 2 coin envelopes: one labelled “Used Lancets,” the other labelled “DBS Card”
- 1 clear resealable bag, with an absorbent packet (desiccant) and a humidity indicator card inside
- 1 plastic return envelope with VEC mailing address



*\*Do not leave any item unattended around children. There is a small risk that blood from a tested individual may come in contact with another individual during or following the testing procedure. Following these instructions will decrease that risk.*

**A. Select a puncture site.**

- Select a finger to collect a few drops of blood. Middle or ring finger is recommended. Do not use thumb or pinky finger.
- You should use the side of your finger just below the tip.
- The puncture should occur across the fingerprints, not parallel to them.

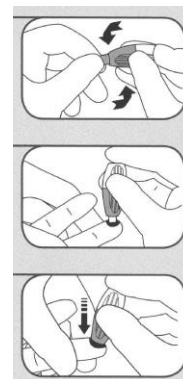


**B. Prepare to collect the blood sample.**

1. Find a comfortable seating position and arrange the content of the kit in front of you.
2. Warm your hands to increase blood flow by rubbing them together or running them under warm water.
3. Wash your hands thoroughly with warm water and soap for at least 20 seconds. Dry hands completely.
4. Cleanse the selected site with alcohol swab. Allow the skin to air dry.

**C. Perform the finger prick.**

1. Twist and pull the protective cap away from the lancet. Carefully set the cap down.
2. Hold the lancet between the fingers of one hand, while placing it on the preferred puncture site of the other hand (for parents/guardians: hold the tip of your child’s finger that will be pricked).
3. To activate the lancet, press the lancet firmly against the preferred puncture site. Do not remove the lancet until you’ve heard a “click”. Set the lancet aside to mail back to VEC later.
4. Wipe off the first drop of blood with a sterile gauze.



**D. Collect the sample on the blood spot card.**

1. Allow a second large blood drop to form. It may help to gently massage the base of the finger to stimulate blood flow.
2. Gently touch the large blood drop to the center of the 1<sup>st</sup> circle on the card and, in one step, allow a sufficient quantity of blood to COMPLETELY fill the circle and soak through the back (do not let the finger touch the card!).
3. Move your finger to the next circle and repeat the previous step. Continue to fill all 5 circles (or as many as you can).



**PLEASE REFER TO END OF DOCUMENT FOR EXAMPLES OF INVALID AND ACCEPTABLE BLOOD SPOTS**

Remember that 3 completely filled circles are better than 5 incomplete circles. If blood stops flowing before 3 circles are filled, you can use the second lancet to prick a different finger.

- a. Multiple small drops of blood can be dropped onto the same circle, but don't overlay them.
  - b. Avoid excessive “milking” or squeezing the area around the puncture site.
  - c. Avoid touching or smearing spots.
4. When completed, place a sterile gauze against your finger until the bleeding stops.
  5. Put the used lancets into the labelled coin envelope.

**E. Dry the sample.**

1. Let the card dry for at least 3 hours: using the cover flap of the blood spot card, prop the blood spots up and lay the card face up on a clean surface, and avoid touching it or knocking it over.
2. Dry the card away from direct heat and sunlight. Do not refrigerate.
3. Once the card is dried, fold the paper flap on the card to cover the spots. Ensure the date of collection is written on the front of the card.



**F. Pack the sample for mailing.**


1. Put the dried card into the coin envelope labelled “DBS Card.”
2. Place this coin envelope in the clear resealable bag provided (keep the absorbent packet and the humidity indicator card inside the bag).
3. Squeeze as much air out as possible, then seal the bag.
4. Put the clear resealable bag and the other coin envelope with used lancets in the plastic return envelope, and mail it back to the VEC. You do not have to pay postage.




**PLEASE MAIL THE PACKAGE WITHIN 24 HOURS AFTER SAMPLE COLLECTION. THANK YOU**

**EXAMPLES OF INVALID BLOOD SPOTS**


Specimen quantity insufficient for testing.




Specimen appears scratched or abraded.




Specimen not dry before transport.




Specimen appears supersaturated.




Specimen appears diluted, discoloured or contaminated.



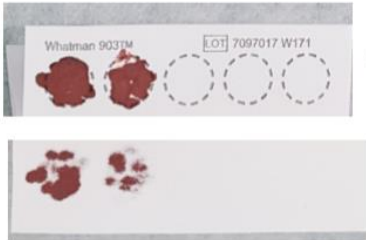
Specimen exhibits serum rings.



Specimen appears dotted or layered.



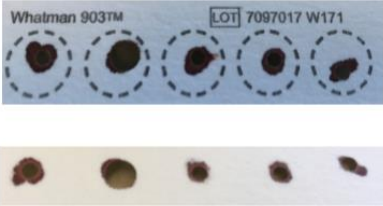
**PLEASE REFER TO NEXT PAGE FOR EXAMPLES OF ACCEPTABLE BLOOD SPOTS**



Front

Back

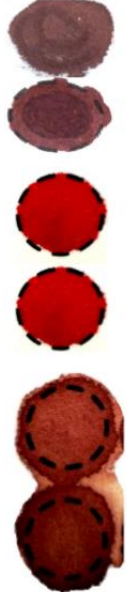
1. Blood not soaked through-  
Specimen insufficient for testing



Front

Back

2. Spots too small-  
Entire card was only enough for one test



#3 Overlaying

#4 Insufficient Drying

#5 Contamination

**EXAMPLES OF ACCEPTABLE BLOOD SPOTS**

