



Cool  
Climate  
Oenology &  
Viticulture  
Institute

Brock University



# Grapevine Virus Testing

Instructions for collecting grape  
leaves with petioles for virus testing

## GETTING STARTED

The following instructions will guide you on how to collect and send grapevine leaf samples to CCOVI's grapevine virology lab. Included in the instructions are leaf collection methods for a single vine as well as a composite of five vines. Composite of five vine samples are recommended for large-scale testing.

### A. LABEL THE SAMPLE COLLECTION BAG

Label each sample collection bag (typically, medium size freezer Ziploc bag or any other bag with a closure) using a permanent marker with the following information:

- Name of the Vineyard
- Name or Number of the Block
- Name of the Variety/Cultivar
- Number of the Row
- Number of the Panel or Post
- Number of the Vine

Example: AA/B10/CH/R1/P2/V3 (Vineyard name short form / Block number / Varietal name / Row number / Panel (post) number / Vine number)

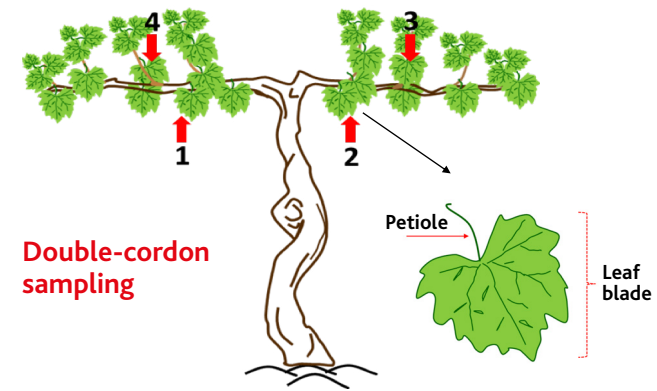
### B. COLLECT THE LEAVES WITH PETIOLES

As shown in the diagram, collect mature leaves with petioles attached from bottom portion of the canopy. The petiole is the slender stem that connects the leaf blade to the shoot.

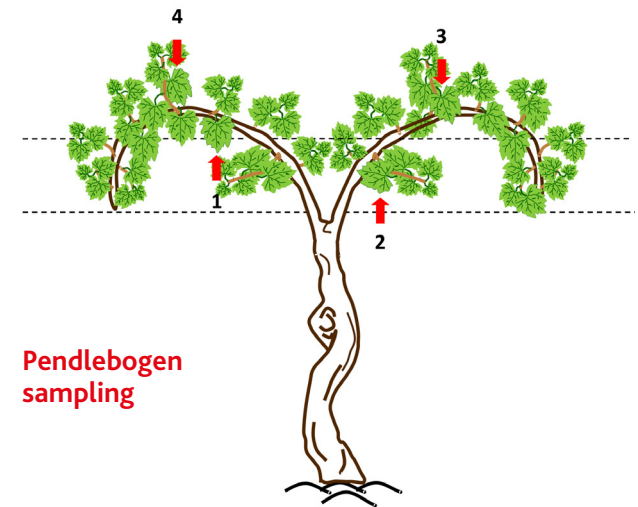
Included are examples of how to sample from common grapevine training systems within Ontario.

**Collection should always be from the bottom canopy covering both the front and back of the vine.**

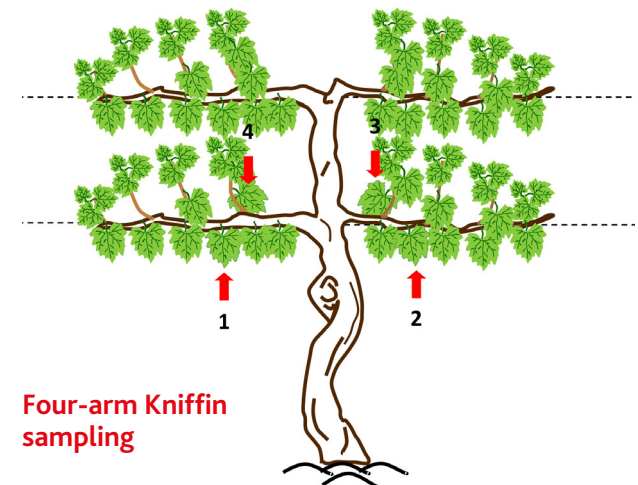
## EXAMPLES



Double-cordon  
sampling



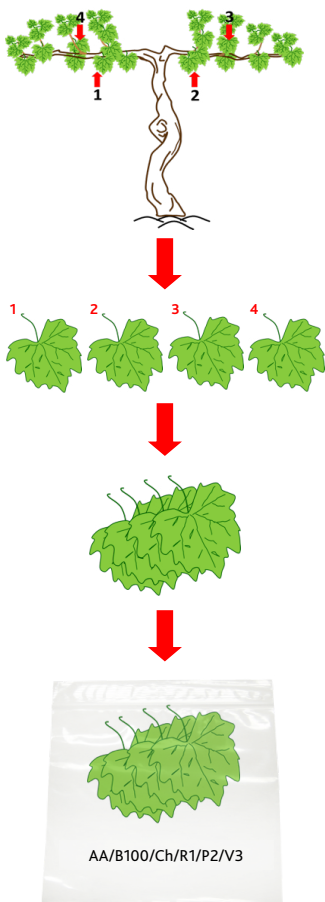
Pendlebogen  
sampling



Four-arm Kniffin  
sampling

## SAMPLING FROM A SINGLE VINE

1. As shown in the diagram, please collect FOUR mature leaves with petioles covering the FRONT and BACK portion of the vine from all FOUR directions (a total of four leaves per vine)
2. Place all FOUR mature leaves with petioles on top of each other and place them inside the pre-labeled sample collection bag
3. Seal the bag before sending the sample to the laboratory



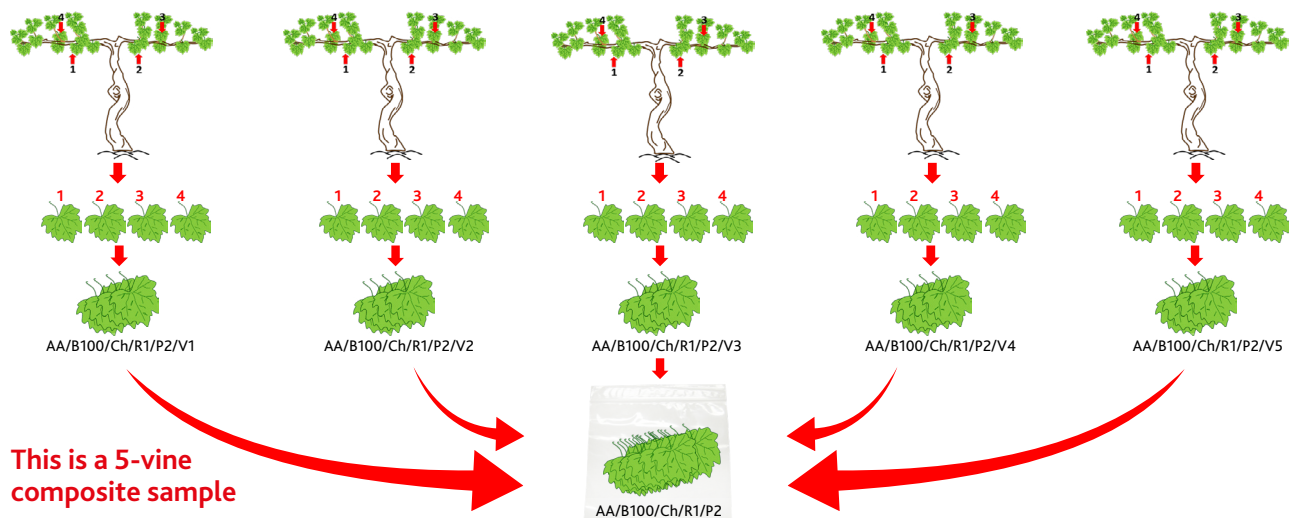
**Keep samples cool to prevent drying and microbial degradation**

## WHEN SAMPLING PLEASE AVOID:

- Collecting when raining (for virus testing moisture free leaves are expected) and avoid adding additional moisture to samples
- Young leaves or leaves from the upper canopy
- Dead or senescing leaves
- Leaves covered with soil/dirt
- Leaves that are heavily damaged by insects feeding or damaged by animals, agriculture equipment, etc.
- Touching the end of petiole where it is attached to the shoot

## SAMPLING A COMPOSITE OF FIVE VINES

1. As shown in the diagram, please collect FOUR mature leaves with petioles covering FRONT and BACK portion of the vine from all FOUR directions (a total of four leaves with petioles per vine)
2. Collect accordingly for all five vines.
3. Place the four leaves of each vine on top of each other and stack all the 20 leaves with petioles (four leaves with petioles from each vine) on top of each other and place them into a pre-labeled sample collection bag as shown in the cartoon below.
4. Seal sample bag before sending to the laboratory.



**This is a 5-vine composite sample**

## C. SAMPLE TRANSPORT

Submitting samples on the same day of collection is highly recommended. If sending by mail, please store leaf samples in a Styrofoam cooler box with ice packs and seal samples before shipping overnight.

Transport the samples in a sampling box (usually a cooler with ice packs) to the laboratory as soon as possible with the sample submission form. Samples can be stored short-term (up to 48 hours) at 4°C. If storing, make sure sample bags also contain the sampling date.

Sample submission forms will be available online. Send the samples as well as the submission form using the shipping information below.

## SHIPPING LABEL

Cool Climate Oenology and Viticulture Institute  
Grapevine Virology Lab  
Brock University  
1812 Sir Isaac Brock Way  
St. Catharines, ON, Canada  
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## CONTACT US

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