

Procedure For Collecting Cane Samples for GLRaV-2 and 3 Testing

The **ELISA** technique is an efficient method for the detection of grapevine leafroll virus 2 and 3 (GLRaV-2 and 3) in grapevines.

However, the virus concentration varies considerably according to the tissue source, the meteorological conditions and thus the time of the season.

These facts have to be considered for obtaining reliable test results. Recommended tissue is cambium scrapings from mature canes during dormancy ideally after leaf drop (usually around late June, early July). Cane samples are suitable for testing viruses on scion wood (bud-wood) as well as rootstock.

Procedure for Collecting a Single Vine

Collect 2 cane samples from different sections of the vine to account for the possible uneven distribution of virus in the plant.

Make sure that they are:

- Collected from each cordon.
- Mature, at least one year old, live and lignified.
- Collected between 10-70cm from the head of the vine and not from the tip of the cane.
- About 15cm long.
- Both cuttings are from the same vine.
- Both cuttings are more than 0.5 cm thick (preferably between 2nd and 8th bud on the cane).

Then:

1. Attach one label to the samples and the other to the plant.
2. Labels could contain information such as:
 - Row; Bay; Plant; Variety/Clone of grapevine OR a sample number that relates to your own identification records.
3. Fill in the request form with client details and sample IDs. Request forms can be found on our website: https://www.hill-labs.co.nz/media/kkccct02u/51714v3_analysis-request-form-grape-leaf-and-cane-testing-for-glraV-by-elisa-1.pdf
4. Keep canes together with rubber band or put them in a clear plastic bag.

If you cannot dispatch the samples the same day as collection, keep the box in the fridge/cool store.

Please Note: As stated in the Grafted Grapevine Standard version 4.0, we do not recommend the testing of leaves for rootstock as the result can be unreliable.

Procedure for Collecting a Composite Vine

1. Collection procedure is as above
2. Composite samples can have maximum of 6 plants, = total of 12 canes/composite sample.
3. Collect 1 cane sample from each side of the vine with in the circled zone in figure 1

Cordons



Fig 1: Location on the vine for sampling canes



Fig 2: Single cane sample



Fig 3: Composite cane sample

PROCEDURE FOR RE- COLLECTION OF CANE SAMPLES

1. If a composite sample is positive, recollect from canes from the same vines but these need to be labelled and submitted as individual samples.
2. Only the vines that were in the original composite samples are to be collected.
3. If testing vines either side of the composite sample, they must be submitted as a separate new sample. This is to ensure traceability to the original sample.