

## Procedure For Collecting Leaf Samples for GLRaV-2 and 3 Testing

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The **ELISA** technique is an efficient method for the detection of grapevine leafroll virus 2 and 3 (GLRaV-2 and GLRaV-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 are well developed mature leaves, especially petioles and veins from the lower part of the plant late in the season. Leaf samples are suitable for testing viruses on scion wood (budwood) but not on rootstock.

### Procedure for Collecting a Single Vine

1. Collect 2 mature leaves including petiole, from different sections of the vine, between the first and fifth node from the base of the cordon, to account for the possible uneven distribution of virus in the plant. **See Fig.1**
2. If leaf plucking has been done and the first 3 or 4 leaves are gone, then take the first available mature leaf.
3. Never collect leaves from laterals or very young leaves.
4. Ensure that leaf samples are collected in dry, cool weather.
5. Keep your samples away from direct sunlight so they do not get burnt.
6. Place the leaves flat in a clear plastic bag together with the label.
7. Use the other label to mark the plant.
8. Fill in the request form with client details and sample IDs. This can be found on our website

[https://www.hill-labs.co.nz/media/kkct02u/51714v3\\_analysis-request-form-grape-leaf-and-cane-testing-for-glraV-by-elisa-1.pdf](https://www.hill-labs.co.nz/media/kkct02u/51714v3_analysis-request-form-grape-leaf-and-cane-testing-for-glraV-by-elisa-1.pdf)

**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.**

It is recommended to dispatch on the same day as collection, if this is not possible, leaves should be chilled.

### Procedure for Collecting a Composite Sample

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



**Figure 1: Location on the vine for sampling leaves for testing**

4. Collect 2 mature leaves including the petiole from each side of the vine between the 1<sup>st</sup> and 5<sup>th</sup> node from the base of the cordon for both Individual and Composite samples.



## Procedure For Recollection of Leaf Samples

1. If a composite sample is positive, recollect from leaves 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.