

Technical Note

Grapevine Leaf and Petiole Sampling Protocol

1. Collection of samples – Timing and growth stages

Timing is extremely important as interpretation guidelines are established at specific stages of vine growth. Correct timing is especially important prior to flowering with some nutrients levels changing fairly rapidly at this time of the season with leaf expansion etc. Any slight difference in sampling (e.g. +/- 3 days) could give quite a variation. If possible avoid sampling after fungicide or nutrient spray applications, as these could contaminate samples.

Samples can be taken at three growth stages:

Timing	Recommended Plant Part to be sampled
Pre-Flowering Three weeks prior to flowering.	Leaf Blade or Petiole
Flowering When the majority of the vines are in full flower.	Leaf Blade or Petiole
Veraison (Ripening) When berries begin to soften and colour.	Leaf Blade or Petiole

2. Collecting the sample

Either the petiole (stem of the leaf) or the leaf blade opposite the bunch at the base of the shoot can be sampled, depending on the time of the season and your preference. Petioles are the plant part most widely sampled in grapevines in Australia, and **Phosyn Analytical** has critical level guidelines for both leaf blade and petiole at pre-flowering, flowering and veraison growth stages.

Therefore, leaf blades and petioles can be sampled at pre-flowering, flowering or at veraison. If you are selecting petioles, they should be separated from the leaf blade immediately after sampling, the leaf blade can then be discarded, and vice-versa if sampling leaves (see figure 1). Samples should be taken from leaves or petioles opposite either of the basal clusters (see figure 2).

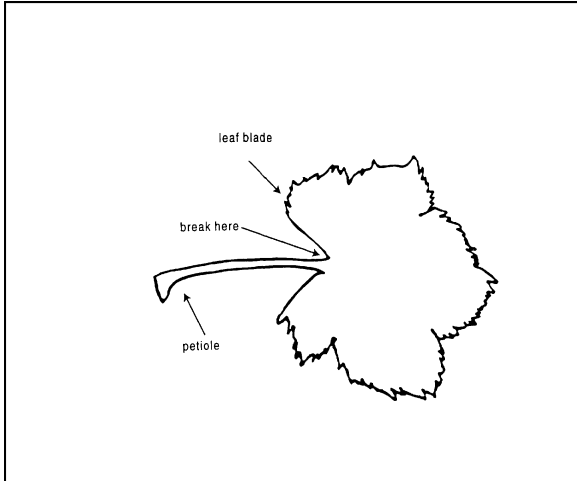


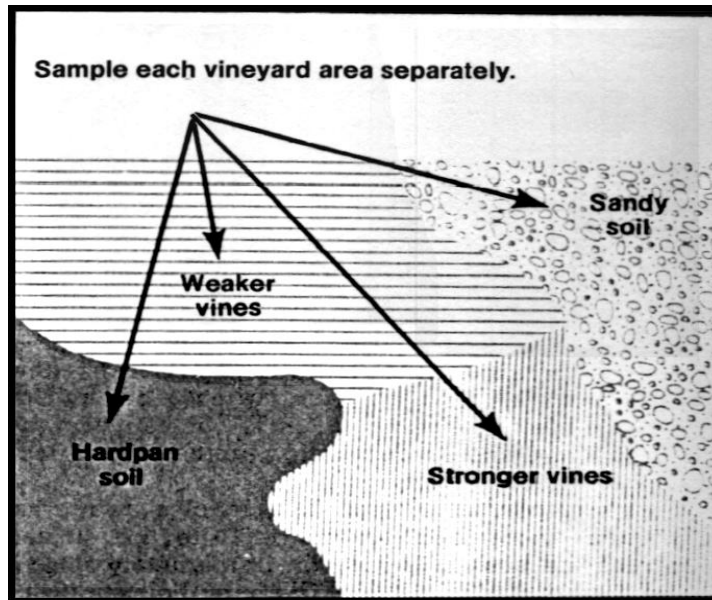
Fig.1: Leaf petiole and blade



Fig.2: Select petiole or leaf opposite either of the basal clusters.

3. Taking A Representative Sample

Each sample should be taken from a uniform section of the vineyard that is the same soil type, variety and root-stock. Collect 75 to 100 petioles or a minimum of 50 leaf blades; with each leaf or petiole to be taken from separate vines. It is sometimes useful to carry out comparative sampling from good or poor performing areas within a variety.



4. Care of Samples – Collection and despatch

Samples can be contaminated by some fungicides and nutrient sprays, which may give erroneous laboratory results. Wash hands and preferably use the white **Phosyn Analytical** paper bags provided. Avoid the use of plastic bags for plant tissue samples because of moisture condensation and possible breakdown of the samples. Wherever possible, please collect and despatch samples by the first half of the week to ensure that the samples arrive at the laboratory before the weekend. Always mail samples on the same day as they are taken from the vines.

IMPORTANT – If your region is within a ‘Vine disease district’ or ‘Recorded Phylloxera area’, please contact **Phosyn Analytical** for special instructions. Some of these affected regions are in central (Nagambie, Mooroopna) and northeast Victoria (North East, King Valley) in southeast NSW (Corowa), and in the counties of Camden and Cumberland near Sydney.

5. Sample Information

Carefully complete the **Phosyn Analytical Analysis request form** and sample details on the Phosyn paper sample bag. An example of a completed **Analysis request form** is attached as a guide. Include the top (white) request form with the samples when mailing to the laboratory for analysis, and retain the carbon copy for your own information. Within 5 working days, **Phosyn Analytical** will forward the analysis results to you in a report complete with analysis interpretations and recommendations.

For further information contact Phosyn Analytical or your local agronomist/consultant.

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