

Grape sampling, processing and transport following vineyard smoke exposure

Collecting grape samples

Previous research has shown that the concentration of free volatile phenols can vary considerably between individual vines within the same vineyard. Consequently, collecting a representative sample is essential to ensure the analytical results accurately reflect the level of smoke exposure across the vineyard.

A random sample of 30 grape bunches is recommended, collected across the entire vineyard with no more than one bunch taken from any individual vine. This approach helps capture the natural variability in smoke compound uptake and provides a more representative sample of the vineyard as a whole.

Where a property contains multiple blocks of the same grape variety, producers may choose to submit representative samples from selected blocks to evaluate differences in smoke exposure and prioritise harvesting or management decisions. This is even more important if blocks are a long way apart.



Figure 1: A diagrammatic representation of randomly selecting 30 positions across an individual vineyard to select one bunch per vine.

Once all 30 grape bunches have been collected, remove approximately half of the berries from each bunch and place them into a clean, large container. Thoroughly mix the berries to create a representative composite sample.

From this mixed sample, collect approximately 500 grams of berries, place them into a labelled, sealed bag, and prepare them for shipment. Zip-lock bags are ideal, as they provide a secure, leak-resistant seal during transport.

Take care to exclude leaves, stems and other material other than grapes (MOG), as these can affect sample quality and may interfere with the analysis.



Figure 2: Plucking berries from bunches into a typical 'kitty litter' tray prior to mixing and sub-sampling 500 grams into a zip-lock plastic bag.

Each grape sample should be double-bagged using appropriately sized, heavy-duty zip-lock bags. The samples should then be frozen in a standard -18°C freezer for at least 24 hours before dispatch to the laboratory.

To prevent leakage or cross-contamination during transport, ensure that each sample is securely sealed and packaged individually.

Both the inner and outer bags must be clearly labelled with adhesive labels including:

- Grower's name and address
- Grape variety
- Vineyard block identification

Providing the grape variety is particularly important, as the interpretation of smoke taint results can vary between different cultivars.

Packaging for transport

Frozen samples should be placed in a polystyrene insulated shipping box together with sufficient ice packs or other suitable coolant to keep the samples frozen throughout transit.

Once packed, the insulated box should be securely sealed with strong packing tape and dispatched as soon as possible using an overnight courier service.

To minimise the risk of samples being delayed over a weekend, shipments should be sent early in the working week (preferably Monday or Tuesday) so they arrive at the laboratory in optimum condition for analysis.

Documentation

Following Brexit, the import of fresh grapes from the European Union into Great Britain is subject to UK plant health and biosecurity regulations.

Depending on the country of origin and current import requirements, shipments may require:

- A phytosanitary certificate issued by the exporting country's National Plant Protection Organisation (NPPO).

- Appropriate customs declarations.
- Compliance with any applicable UK import controls for plant products.

Place all completed sample submission forms and accompanying documentation in a waterproof envelope and securely attach it to the outside of the insulated shipping box.

We also recommend retaining:

- A dispatch log of all samples sent.
- Copies of all submission documentation.

These records should be kept until all samples have been received by the laboratory and the analytical testing has been completed.

Submitting samples to us

If you are a new client, and need to setup an account, please contact us at wines@campdenbri.co.uk or support@campdenbri.co.uk

Further instructions on submitting samples can be found at:
<https://www.campdenbri.co.uk/services/sample-submission.php>.

Complete, print, and send a sample submission form:
<https://www.campdenbri.co.uk/services/sample-submission-form.php>.

Send all samples to the Chipping Campden site where the analysis is completed.

Coordinating large-scale smoke events

During major regional smoke events, when many vineyards require testing simultaneously, a centralised collection point can provide a more efficient approach. Regional wine or grower associations may coordinate the collection and consolidation of samples, paperwork and courier logistics before shipment to Campden BRI. This approach helps streamline transport, reduce shipping costs and ensure samples are processed as efficiently as possible during periods of high demand.

To ensure results are available in time to support harvest decisions, we recommend submitting samples as early as possible before the anticipated harvest date.

Need further assistance?

If you require further guidance on smoke taint, sample collection, shipping requirements or analytical testing, the technical experts at Campden BRI are here to help. Whether you have questions before sampling, need advice on interpreting results or would like to discuss the most appropriate testing strategy for your vineyard or winery, our team can provide practical, science-based support.

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