

## Smoke taint analysis for customers outside Australia



### What analysis is available?

Research at the AWRI has demonstrated that phenolic compounds such as guaiacol, 4-methylguaiacol, cresol and syringol as well as their sugar-bound (non-volatile) precursors are responsible for off-flavours and aromas caused by exposure to smoke.

Due to biosecurity restrictions, AWRI Commercial Services is only able to accept wine samples (not grapes or juice) from customers outside Australia for smoke taint analysis. Levels of volatile phenols and non-volatile smoke precursor compounds that may affect wine quality will be analysed. Understanding the levels of these marker compounds in finished wine or micro-ferments may assist with assessing the risk of smoke taint.

### Which marker compounds are analysed?

Research at the AWRI has shown guaiacol and 4-methylguaiacol as important compounds contributing to 'smoky' off aromas and flavours in grapes and wines; however, further research has shown that other volatile phenols can also play a role in the impact of bushfire smoke. Analysis of important non-volatile precursor compounds provides additional detailed information on the potential development of smoke effects. It is recommended that analysis of both volatile and non-volatile compounds is conducted. The full list of compounds analysed is shown in Table 1. Volatile and non-volatile analyses are offered as separate analytical panels.



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Table 1. Compounds included in smoke taint analysis panels

<b>Volatile phenols</b>	<b>Non-volatile bound phenols</b>
Guaiacol	Guaiacol rutinoside
4-Methylguaiacol	Methylguaiacol rutinoside
Syringol	Syringol gentiobioside
4-Methylsyringol	Methylsyringol gentiobioside
o-Cresol	Cresol rutinoside
m-Cresol	Phenol rutinoside
p-Cresol	

## How do I send wine samples for analysis?

Samples of finished wine or dry micro-ferments (100 mL) in plastic containers can be sent directly to the AWRI by international courier. Please ensure that all freight, duties and taxes are prepaid to facilitate faster delivery. It is recommended that micro-ferments be clarified and receive a 100 mg/L addition of sulfur dioxide before despatch. A [protocol for conducting small-scale ferments](#) is available on the AWRI website.

Deliver to: AWRI Commercial Services  
The Australian Wine Research Institute  
Level 1 Receiving, Wine Innovation Central Building  
Hartley Grove Cnr Paratoo Road  
Urrbrae (Adelaide) SA 5064

## How do I pay for my analysis?

If you are an existing client of AWRI Commercial Services, you will be contacted on receipt of samples and provided with a quote that can be paid by credit card, or bank transfer. New clients should refer to the [AWRI Commercial Services new account page](#) for information on how to set up a prepayment account.



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## How long will it take to get my results?

AWRI Commercial Services has a 10 working day turnaround time for the analysis from receipt of samples in the laboratory. Customers will be contacted by email when samples are received. If you have not received your results after the nominated turnaround time, please contact Customer Services on + 61 8 8313 6600.

## How will I receive my results?

Results are sent via email. It is therefore important that AWRI Commercial Services has your correct email address.

## Further reading

Latest information on smoke taint on the AWRI website:

[http://www.awri.com.au/industry\\_support/winemaking\\_resources/smoke-taint/](http://www.awri.com.au/industry_support/winemaking_resources/smoke-taint/)

AWRI Commercial Services smoke taint analysis:

[www.awri.com.au/commercial\\_services/analytical\\_services/analyses/smoke\\_taint/](http://www.awri.com.au/commercial_services/analytical_services/analyses/smoke_taint/)

## Contact

For further information, please contact:

### **AWRI Commercial Services**

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**Website** [www.awri.com.au/commercial\\_services/analytical\\_services/analyses/smoke\\_taint/](http://www.awri.com.au/commercial_services/analytical_services/analyses/smoke_taint/)

**Address** AWRI Commercial Services, Level 1 Receiving Wine Innovation Central Building, Corner of Hartley Grove & Paratoo Rd, Urrbrae (Adelaide), SA 5064