



## Smoke Exposure Testing Services

As wine regions around the world face the immediate effects of devastating fires, the threat of smoke exposure is of concern. Wildfires and controlled burns generate smoke particulates that could be taken up by the berries and leaves of grapes in nearby vineyards. While the chemical composition of smoke from wood pyrolysis is rather complex, free volatile phenols (VPs) are believed to be the major aroma compounds that confer the smoke exposure characteristics to grapes and wines. In the vineyard, these VPs can permeate the grape skins and rapidly bond with the sugars inside to form molecules called glycosides. Once the grapes are fermented, the acidity in the resulting wine will begin to break these bonds (even after bottling), rendering the phenols volatile and releasing their smoky flavor once again.

**IEH Analytical Laboratories in Seattle, WA offers expedited volatile phenol testing services to the wine industry:**

- Matrices: berries, micro-ferments and wine
- Markers - volatile phenols (VPs)-Guaiacol and 4-Methylguaiacol
- Method: GC-MS/MS
- Reporting limit: 0.5 ppb
- Turn-around time (TAT): 5 days
- **Rush services available**

Wines made from smoke-exposed grapes can present undesirable sensory attributes identified as ashy or smoke exposed with reduced palatability and market acceptance.



### Sample size requirements:

- Berries - 250 berries/sample
- Micro-ferment or wine: 60 mL

**All samples should be shipped to:  
IEH Analytical Laboratories  
3927 Aurora Ave. N  
Seattle, WA 98103**

[www.iehinc.com](http://www.iehinc.com)

For more information please contact us by email at [info@iehinc.com](mailto:info@iehinc.com) or call 206-522-5432

