



Smoke Remediation in Wine Technical Tasting

OREGON | JUNE 2023

Event Summary

In June 2023, over 100 winemakers gathered in Willamette Valley for a tasting of three smoke impacted wines of varying wine varietals and smoke severity, processed using [amaea's](#) molecularly imprinted polymers.

Participants were invited to taste and provide sensory feedback on the wines.

With **96%** of participants indicating they would use this treatment for smoke impacted wine, the results revealed the following key insights:

- The treatment **improved sensory outcomes** for **all wines**;
- There was greater potential for remediating the wine **back to its intended program** using [amaea's](#) technology; and
- [amaea's](#) solution is **tailorable** based on wine varietal and smoke severity.

We would like to thank Jackson Family Wines for their collaboration and input into the research and development of [amaea's](#) molecular filtration technology.



SURVEY RESULTS

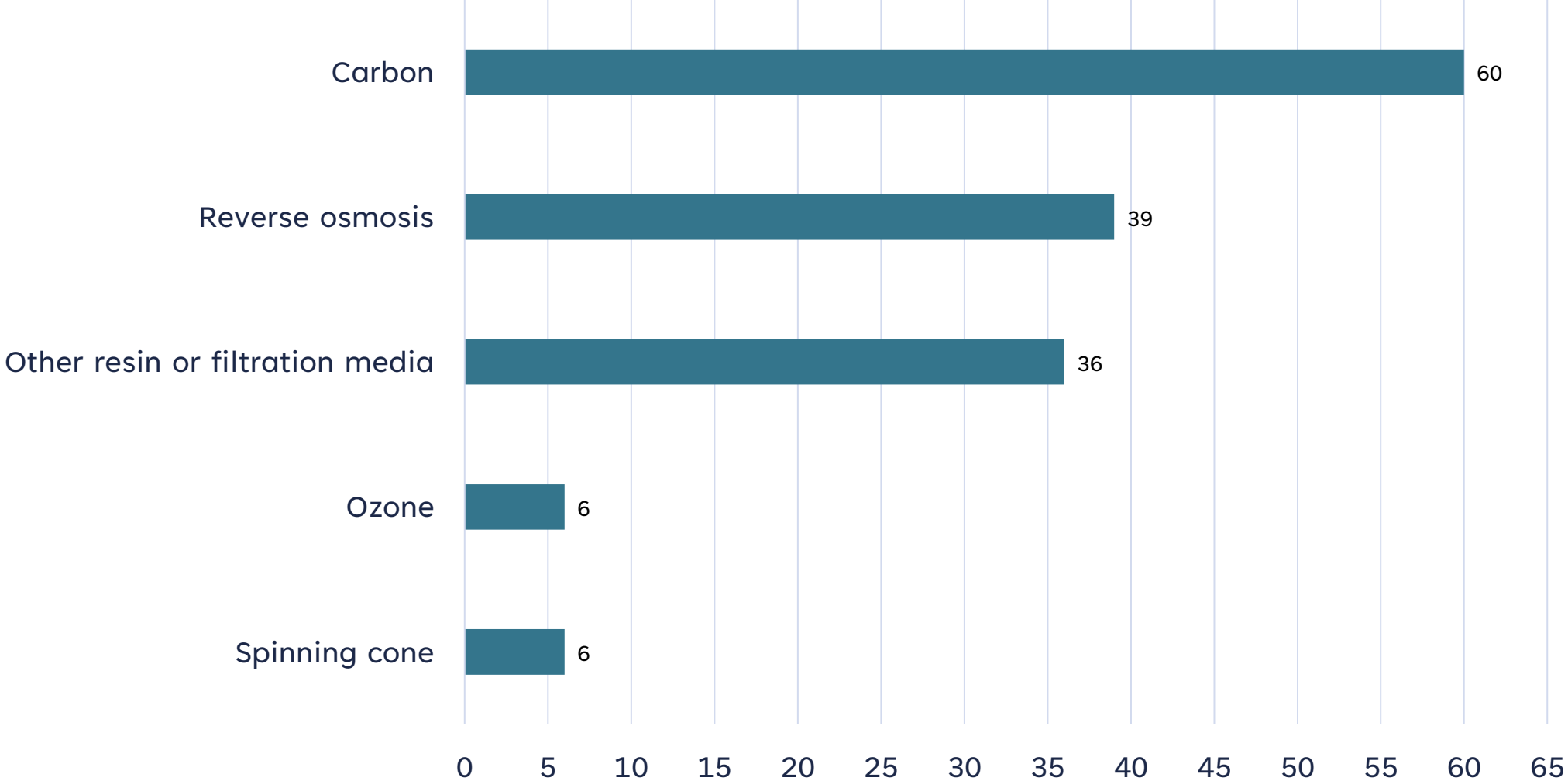
Comparison to existing smoke remediation methods

2020 Mendocino Syrah comparison

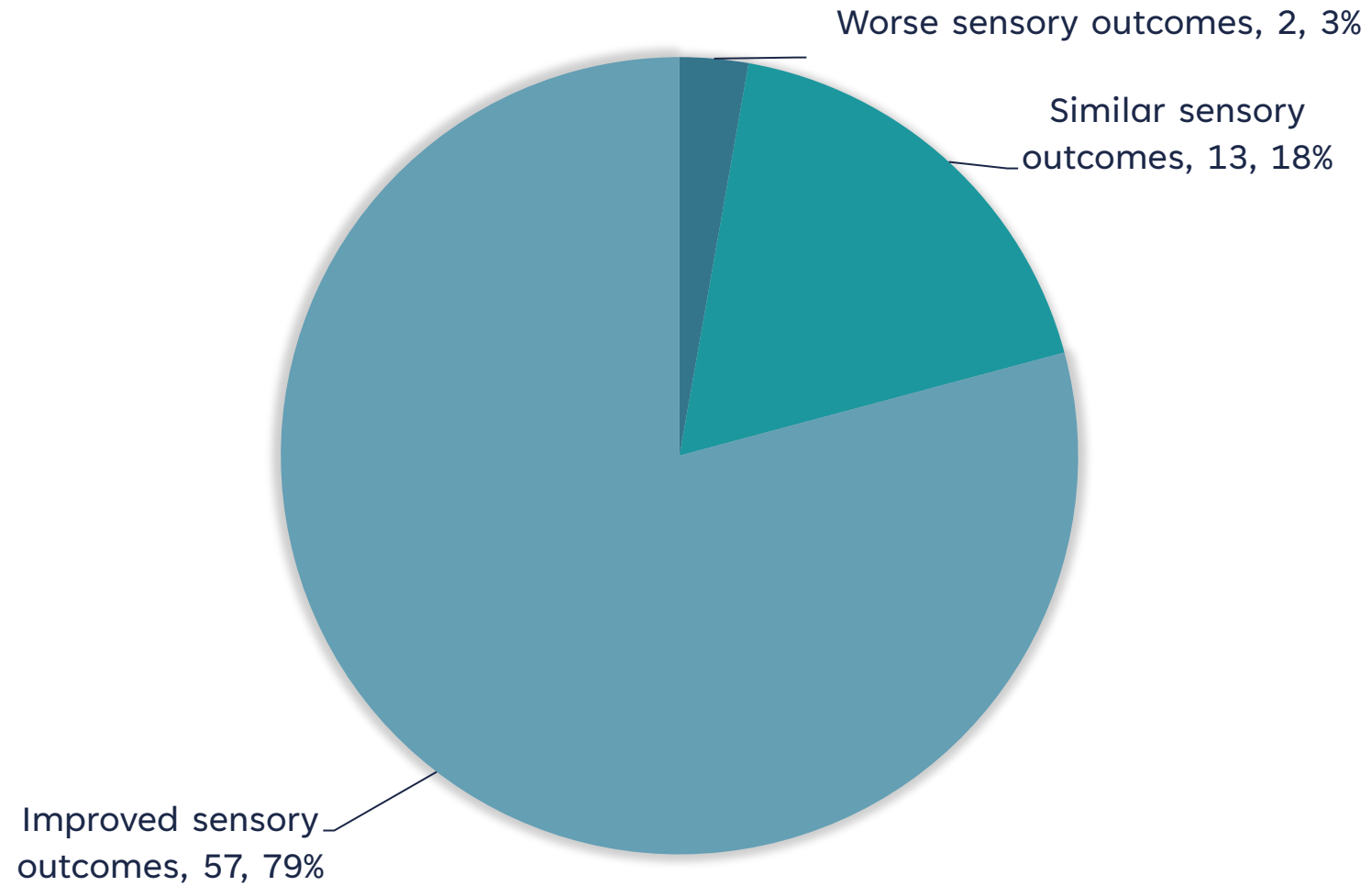
2020 Willamette Pinot Noir comparison

2021 Intentionally smoked Pinot Noir comparison

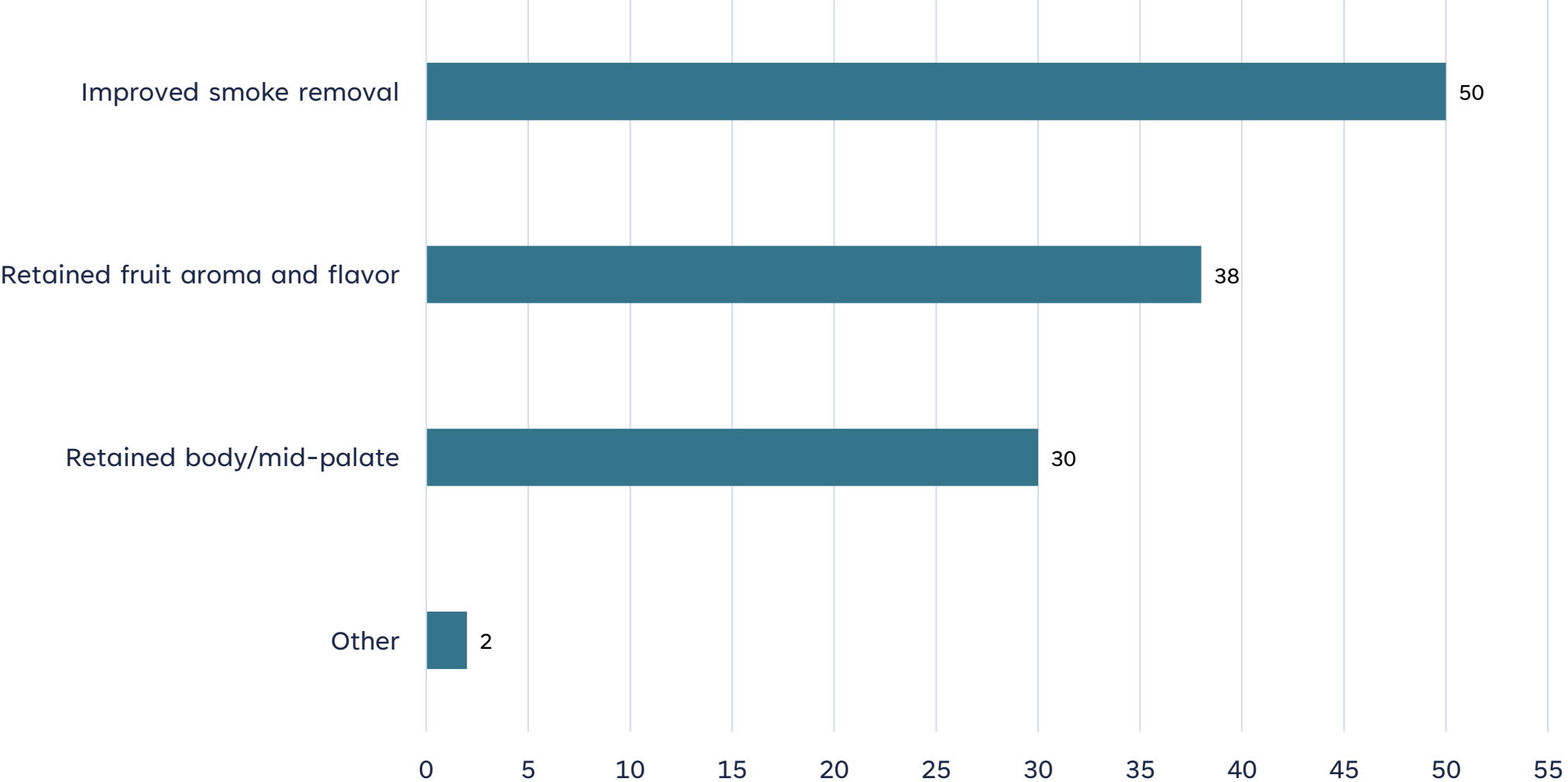
Previous Treatments Used



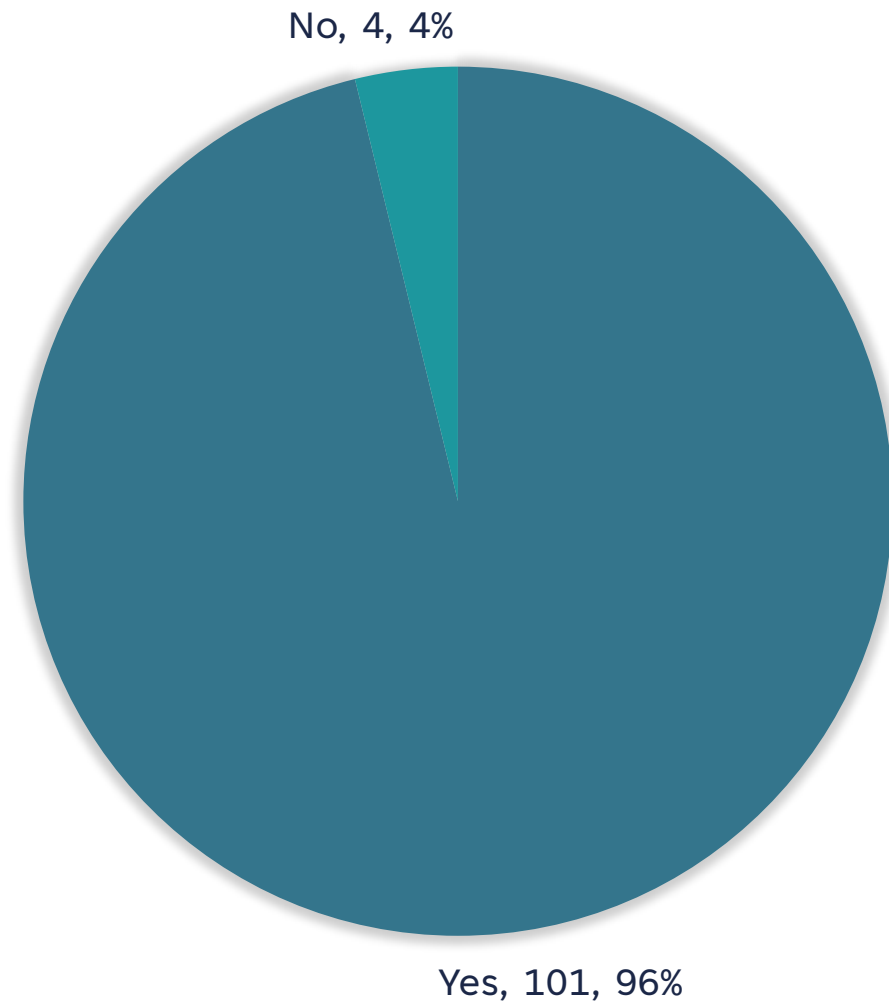
Comparison to Other Treatments



Sensory Outcomes



Would You Use This Treatment?



SURVEY RESULTS

Comparison to existing smoke remediation methods

2020 Mendocino Syrah comparison

2020 Willamette Pinot Noir comparison

2021 Intentionally smoked Pinot Noir comparison

Wine Details: 2020 California Syrah

AVA:	Mendocino County (CA)
Treatment timing:	May 2023
Smoke impact:	Low-Medium
Treatment level:	Low
Notes:	The winery originally planned to use this wine and continued with a standard barrel regime after fermentation. However, after barrel aging, it was determined this wine was too smoke impacted to be used in the intended program.



2020 MENDOCINO SYRAH

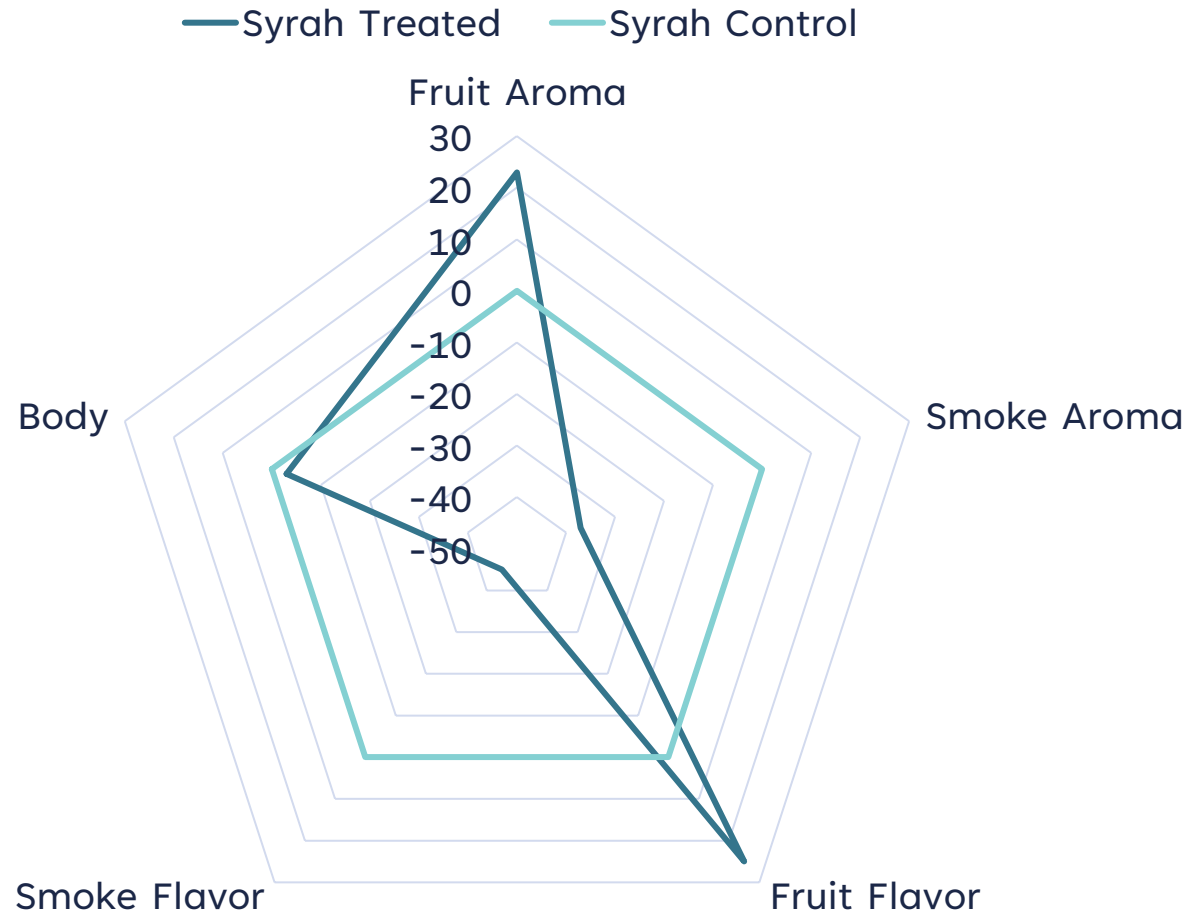
Analytical Results

Analyte	Instrument Detection Limit ($\mu\text{g/L}$)	Untreated	amaea Treated	Removal (%)
		Concentration ($\mu\text{g/L}$)	Concentration ($\mu\text{g/L}$)	
guaiacol	0.5	32.6	25.5	22%
4-methylguaiacol	0.5	13.6	9.8	28%
m-cresol	0.5	1.6	1.1	33%
o-cresol	0.5	2.3	1.6	32%
p-cresol	0.5	2.3	1.5	31%



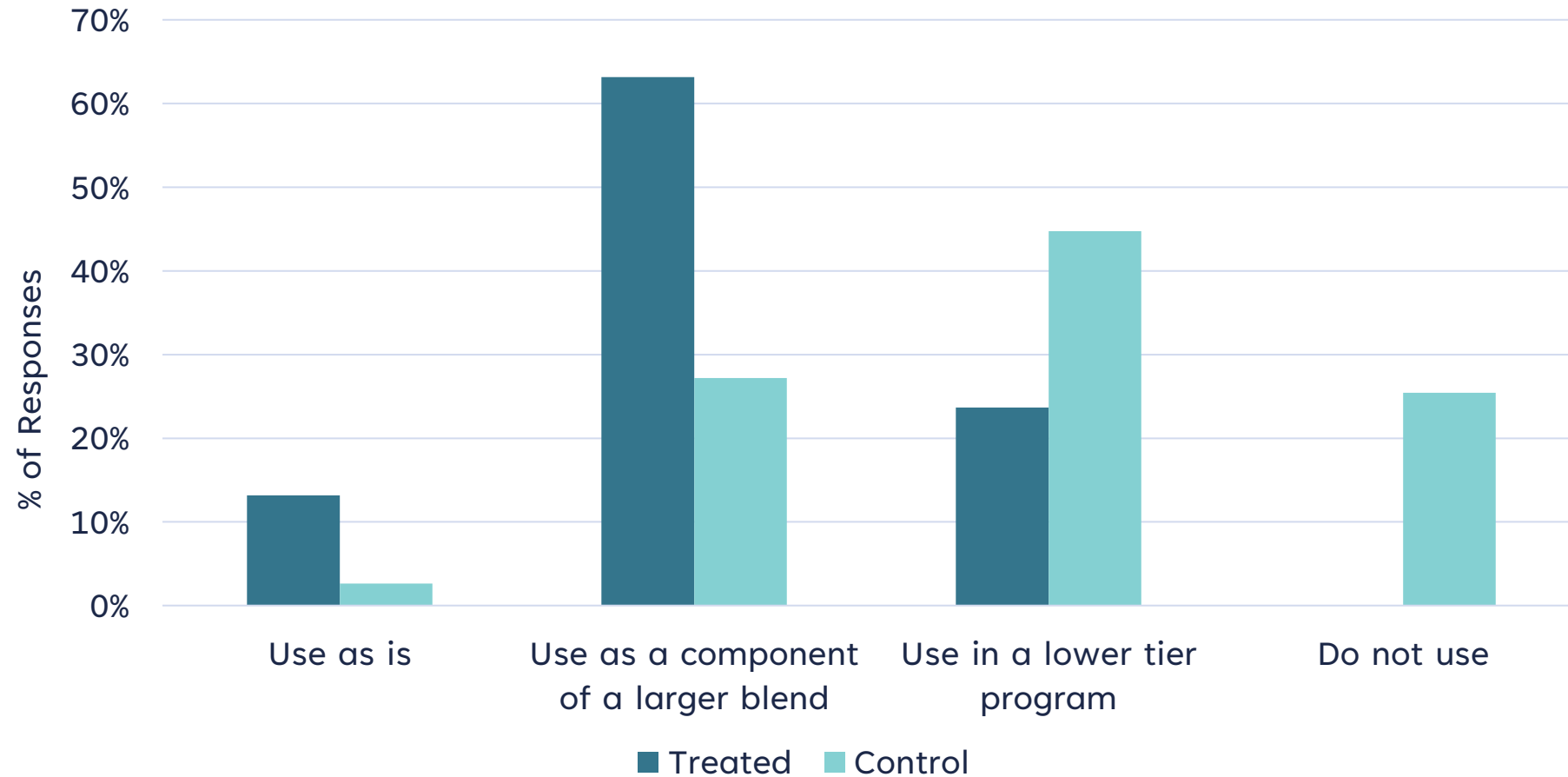
2020 MENDOCINO SYRAH

Attributes



2020 MENDOCINO SYRAH

How Would You Use This Wine?



SURVEY RESULTS

Comparison to existing smoke remediation methods

2020 Mendocino Syrah comparison

2020 Willamette Pinot Noir comparison

2021 Intentionally smoked Pinot Noir comparison

Wine Details: 2020 Willamette Valley Pinot Noir

AVA:	Yamhill-Carlton
Treatment timing:	April 2023
Smoke impact:	High
Treatment level:	Medium - High
Notes:	This wine was naturally exposed to smoke in 2020 and was made with the winery's standard wine making protocol.



2020 WILLAMETE PINOT NOIR

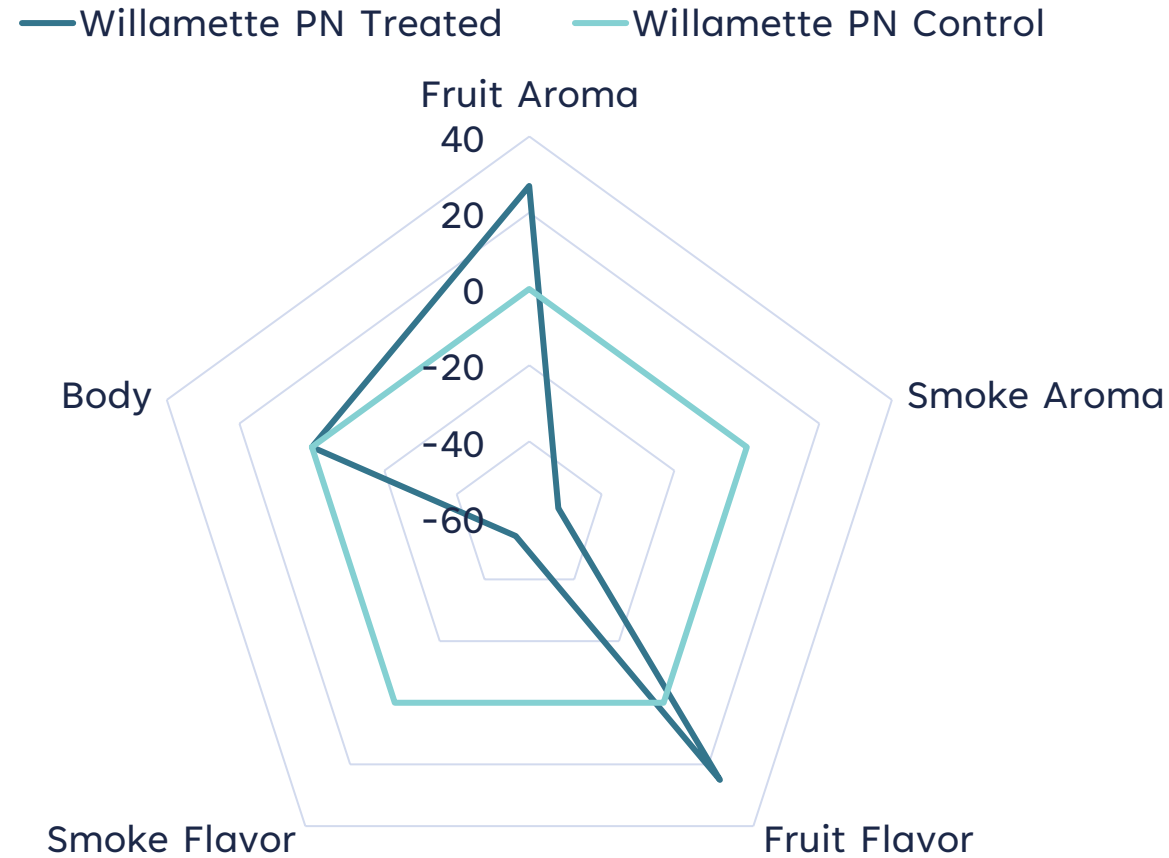
Analytical Results

Analyte	Instrument Detection Limit (µg/L)	Untreated	amaea Treated	Removal (%)
		Concentration (µg/L)	Concentration (µg/L)	
guaiacol	0.5	7.9	5.8	27%
4-methylguaiacol	0.5	1.6	1.5	6%
m-cresol	0.5	3.0	1.6	47%
o-cresol	0.5	5.6	2.9	49%
p-cresol	0.5	2.7	1.2	55%



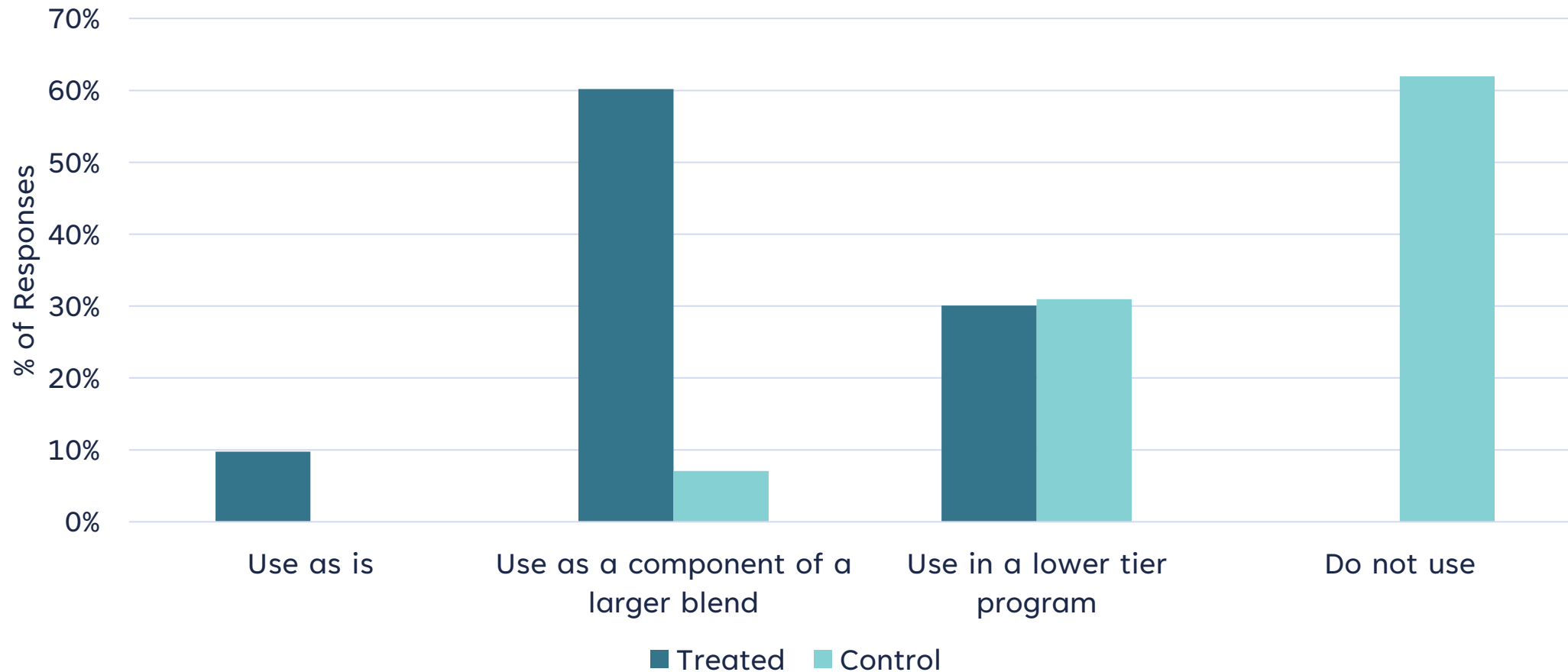
2020 WILLAMETTE PINOT NOIR

Attributes



2020 WILLAMETE PINOT NOIR

How Would You Use This Wine?



SURVEY RESULTS

Comparison to existing smoke remediation methods

2020 Mendocino Syrah comparison

2020 Willamette Pinot Noir comparison

2021 Intentionally smoked Pinot Noir comparison

Wine Details: 2021 Willamette Valley Pinot Noir Intentionally Smoked

AVA:	Yamhill-Carlton
Treatment Timing:	April 2023
Smoke Impact:	Very High
Treatment Level:	High
Notes:	This vineyard was intentionally smoked in 2021 for research purposes.



2020 INTENTIONALLY SMOKED PINOT NOIR

Analytical Results

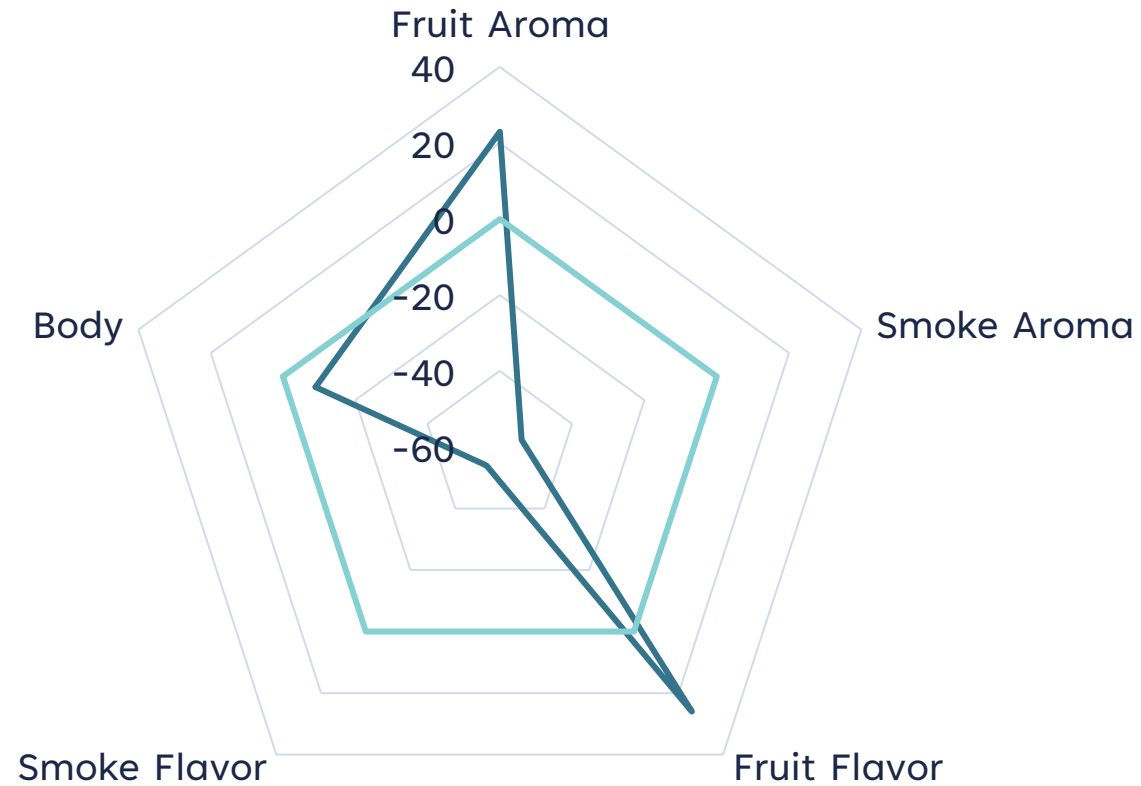
Analyte	Instrument Detection Limit ($\mu\text{g/L}$)	Untreated	amaea Treated	Removal (%)
		Concentration ($\mu\text{g/L}$)	Concentration ($\mu\text{g/L}$)	
guaiacol	0.5	20.4	6.8	67%
4-methylguaiacol	0.5	4.1	1.0	77%
m-cresol	0.5	7.3	1.3	82%
o-cresol	0.5	7.7	1.4	82%
p-cresol	0.5	2.7	<0.5	>82%



2020 INTENTIONALLY SMOKED PINOT NOIR

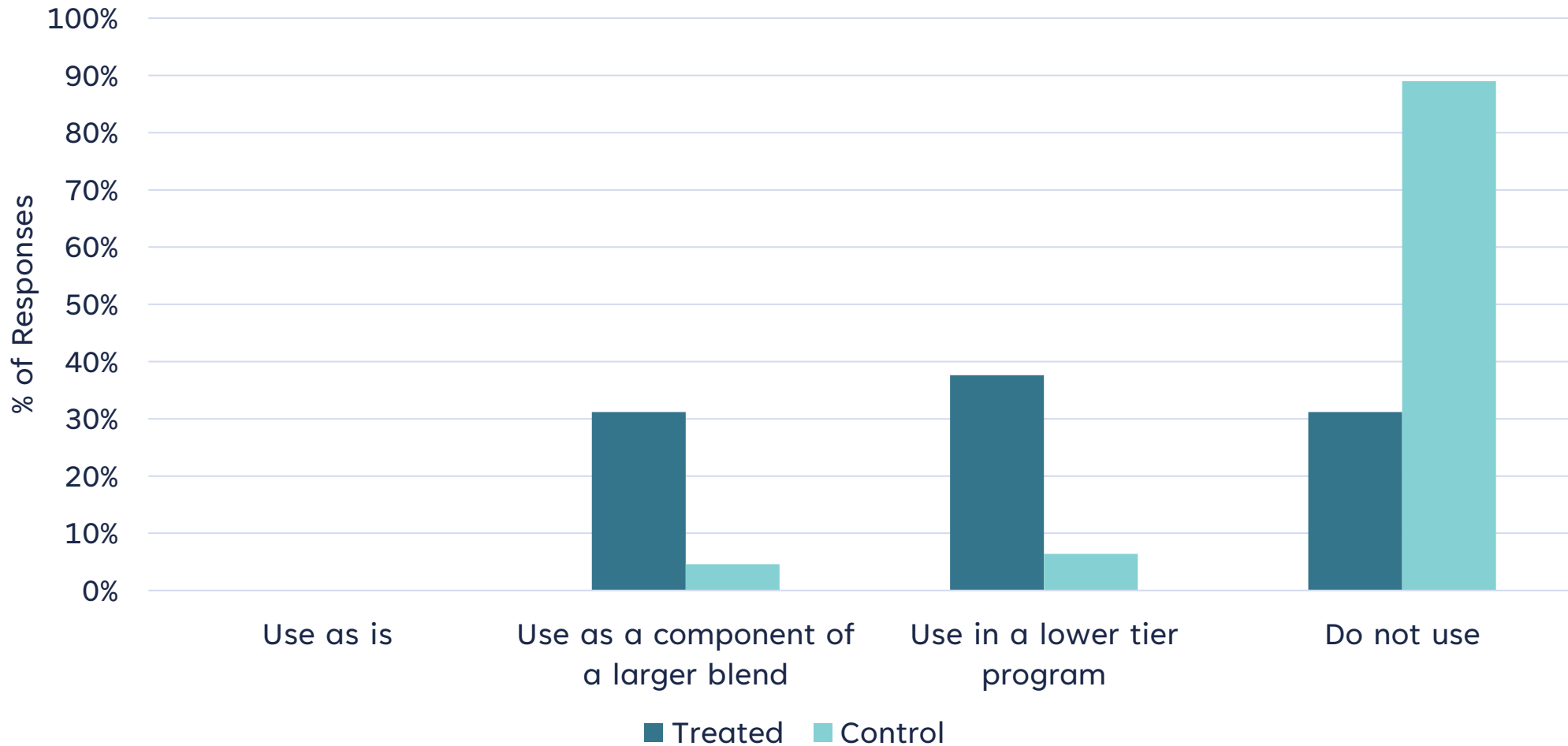
Attributes

— Intentionally Smoked PN Treated — Intentionally Smoked PN Control



2020 INTENTIONALLY SMOKED PINOT NOIR

How Would You Use This Wine?



Further Insights

research



[retention of smoke-impact removal using amaea VPx](#)

molecular filtration technology



[amaea VPx for remediating smoke-impacted wine](#)



[amaea's molecular filtration process](#)



[amaea for winemaking](#)

About **amaea**

Having started in New Zealand in 2011 as a science research facility, **amaea** has evolved into a deep-technology organization focused on developing and commercializing molecular filtration technology.

Working with the wine industry, we have pioneered **amaea VPx** filtration technology to minimize smoke impacts in wine.

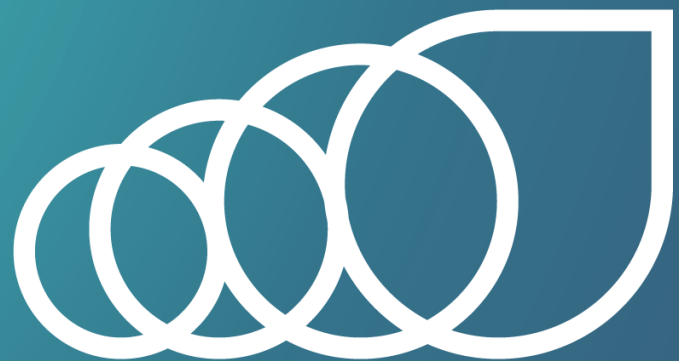
Introducing **amaea VPx**

Available for use in the USA, Canada and New Zealand, **amaea VPx** uses cleverly designed molecular imprinted polymers to capture smoke markers in smoke impacted wine, without compromising on fruit character and body. **amaea VPx**:

- Enables recovery of value from smoke impacted wine;
- Retains key sensory qualities of the wine's varietal character and body;
- Provides winemakers with the ability to tailor treatment parameters by wine type and smoke severity;
- Provides selective removal of volatile phenols at scale and pace; and,
- Easily integrates into existing production processes at your location.

Let's keep the conversation going

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amaea

molecular filtration technology

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