BIOMÉRIEUX

VINTAGE MEETS CUTTING-EDGE

Proactive monitoring for wine spoilers from juice to bottle.

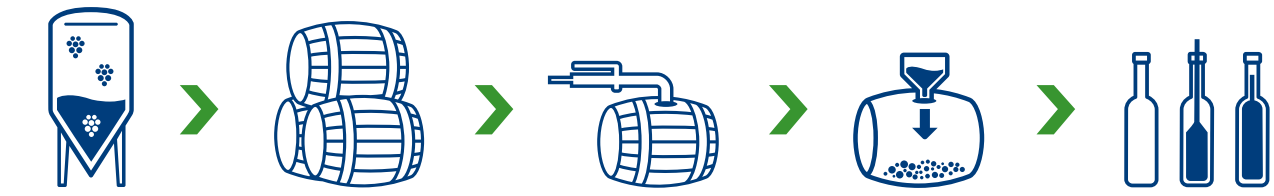
PIONEERING DIAGNOSTICS

Truly Sophisticated Detection

Every winemaker knows that some things get better with age. But for many of the microbes that can spoil wine, the longer they go undetected, the more harm they can cause. During harvest season, the time is especially ripe for unwanted organisms to make their way into the winery and flourish in tanks and barrels Left unchecked, these spoilers can bring wine quality down along with the reputation of your winery. Early detection is critical to protect the lifeblood of your business.

Introducing VINOBRETT™ and VINOPAL™, powered by VERIFLOW™

Together, these advanced diagnostic technologies make it possible to conduct routine, proactive testing throughout the wine-making process to obtain accurate information about the presence of spoilage organisms to prevent costly remediation and preserve quality and value.



VINOBRETT™ FOR *BRETTANOMYCES*

- Detects and quantifies both active and VBNC *Brettanomyces*
- 100% inclusive of 49 known isolates of *Brettanomyces bruxellensis*
- Accurate and sensitive across all stages from harvest to bottling
- Ability to isolate tainted lots early to manage the presence of *Brettanomyces* and minimize the risk of cross-contamination

VINOBRETT™ PERFORMANCE SPECIFICATIONS	
Sensitivity (LOD)	10 cells/mL
Time to results	< 4 hours
Matrix compatibility	Juice, wine, lees, barrel rinsate, colony PCR, enrichment broth
Assay configuration	Qualitative and quantitative
Target selection	Ribosomal Deoxyribonucleic Acid (rDNA) gene
Specificity	*Brettanomyces bruxellensis*
	Active state and VBNC state (Viable But Non-Culturable)

> *Early in-house Brett monitoring in wines during and just after fermentations, which was impossible to do before, allows us to effectively mitigate issues and avoid potential problems later in the process.*

- Tod Mostero, Winemaker
  Dominus Estates

VINOPAL™ FOR *PEDIOCOCCUS & LACTOBACILLUS*

- Identifies and quantifies the presence of *Lactobacillus* and *Pediococcus* species that can contribute to stuck or sluggish fermentations
- Accurate and sensitive to spoilage organisms even at low threshold levels in grape juice and young wines
- Enables prompt response to rapidly-producing bacteria that can impact wine quality

VINOPAL™ PERFORMANCE SPECIFICATIONS	
Sensitivity (LOD)	10-100 cfu/mL
Time to results	< 3 hours
Matrix compatibility	Wine, colony PCR, enrichment broth
Assay configuration	Qualitative and quantitative
Target selection	Ribosomal Deoxyribonucleic Acid (rDNA) gene
Specificity	*Lactobacillus* species: *L. fructivorans, L. backii, L. brevis, L. buchneri, L. hilgardii, L. kunkeei, L. Lindneri, L. mail, L. nagelli, L. oeni, L. paracollinoides, L. rhamnosus, L. vini*
	Pediococcus species: *P. damnosus, P. inopinatus, P. pentosaceus*

"Identifying the presence of Lactobacillus as soon as possible is a critical concern for me. Early detection with VINOPAL™ will allow us to intervene quickly and prevent the loss of wine quality."

- Eric Baugher, Vice President of Winemaking
  Ridge Vineyards

CLASSIC REVOLUTION

Classic microbiological testing, including culturing, requires long wait times with inconclusive results. Current molecular technologies, such as RT-PCR, are too capital and labor-intensive to implement at the winery. All current methods have difficulty analyzing young wines during fermentation.

bioMérieux has the solution.

VINOBRETT™ and VINOPAL™ combines proven diagnostic principles with innovative, proprietary PCR technology to enable accurate, rapid, and early detection of damaging microbes.

FAST
On-site analysis in less than 4 hours

PRECISE
Accurate and sensitive to targeted microbes even at low thresholds in juice and young wines

ECONOMICAL
Affordable, early detection minimizes negative impacts on wine which saves you time and money

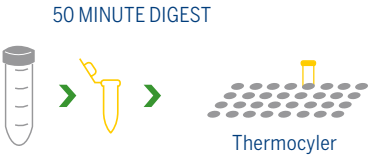
EASY
Sample prep is simple, with minimal training required

TEST PROTOCOL VINOBRETT™

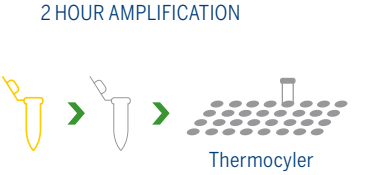
Results in 4 hours with less than 10 minutes hands-on time

COLLECT
Collect sample and centrifuge. Resuspend sample using proprietary Buffer A.

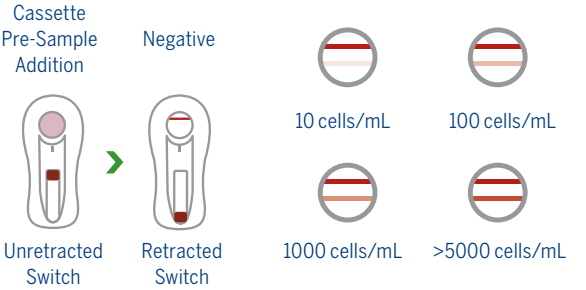
DIGEST
Transfer resuspended sample into provide DIGEST reagent tube. Place tube into Thermocycler and run program.



AMPLIFY (PCR)
Transfer sample from DIGEST reagent tube into provided PCR reagent tube. Place tube into Thermocycler and run program.



ANALYZE
Remove PCR Tube from Thermocycler and add proprietary Buffer B. Dispense PCR Tube contents onto test cassette window. Wait 3 minutes and retract test cassette switch to reveal test results.
One line indicates negative result, two lines indicates semi-quantitative positive results.
Use Signal Quantification Card or VERIFLOW™ Reader for precise quantification.



MORE REAL WORLD RESULTS.

"This tool gives us a clear indisputable result and we can be proactive with that result. If we have issues with a particular barrel we can quarantine it to avoid cross contamination. It is absolutely cost-effective as well, and provides peace of mind about the quality of our wines."

- Hamish Clark, Senior Winemaker
  Saint Clair Family Estate, New Zealand

"Because we can now detect the presence of low levels of Brett before it synthesizes 4 ethyl phenol above the sensory threshold, we can manage the impact of Brett. The kit is easy to use, demands less technician time, and the startup cost is less than traditional PCR"

- Lynn Watanabe, Laboratory Director/Winemaker
  Oakville Winery and Napa Wine Company

"The test is easy to perform and interpret. Because we can now detect Brett sooner, our winemaker can take corrective actions before sensory impacts arise. We can isolate problem barrels or lots, and manage the impact of Brett. This tool enables us to do a better job of preserving quality"

- Doris Francis, PhD, Laboratory Supervisor
  J. Lohr Winery

Find the right solution by speaking with one of our microbiology experts today.

For more information on our proven diagnostic principles for microbial detection, visit **biomerieux-industry.com.**

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