



HARVEST GUIDE

2021 - 2022

*Producing wines as unique
and innovative as our yeast
and bacteria*



Proud distributor

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01 | INTRODUCTION



We are proud of 97 years of dedication to fermentation excellence and providing products as unique as our country, South Africa.

- In existence since 1923.
- Innovative yeast and bacteria products for quality wine production.

*South Africa is unique,
so are our products*

For many years, Anchor has been at the forefront of evolution, adapting and changing to fulfil the needs and requirements of winemakers across the world. From creating the world's first hybrid wine yeast in the form of VIN 13, to expanding our portfolio to include more than just yeast, resulting in changing from Anchor Yeast to Anchor Oenology. With Anchor Oenology we pride ourselves on bringing you a portfolio of fermentation solutions, including yeast, nutrients and bacteria.

Within our yeast portfolio we strive to have a real focused number of products, answering the need for not just robustness, but also yeast strains that can assist winemakers in creating a specific sensory profile in the finished wine. From classical and hybrid strains, to yeast blends and the world's first commercial interspecies hybrid, we have something for every winemaker.

In 2020, Anchor Yeast turned 97 years old. As a supporter of Anchor and our products, this means you have been with us on a journey where together we have achieved many important milestones:

- The first company in the Southern Hemisphere to produce yeast.
- 45 years since the South African wine industry used the first commercially produced Anchor wine yeast.
- 16 years since the Anchor yeast became available in the international wine industry.
- VIN 13, the first hybrid wine yeast, turns 29 years old this year.
- The first ever interspecies hybrid, Exotics Mosaic, celebrates 10 years of iconic wine production.
- The first company in the world to introduce blends of both yeast and bacteria.
- As Anchor Yeast celebrates its 97th birthday, our products are available on 5 different continents and in 30 different countries.

02 | YEAST



EXOTICS

First ever interspecies hybrid wine yeast strain.

The name Exotics now refer to a range of products, representing unique interspecies yeast hybrids for the creation of iconic wines. The Exotics range is responsible for creating complex, beautiful, soft and elegant wines of the highest quality. These hybrids were created to enhance the sensory complexity, similar to the impact of non-*Saccharomyces*, but with the robustness to complete the fermentation.



ALCHEMY

First ever scientifically formulated yeast blend.

In order to increase wine complexity, the Alchemy range has been created based on the synergistic interaction between different yeast strains. The portfolio caters for the production of white, rosé and red wines, delivering enhanced sophistication and complexity, adding mouthfeel and palate weight, in addition to aroma intensity.



LEGACY

First ever hybrid wine yeast strain.

The yeast strains in the Legacy range include the most well-known isolates and hybrids. They are all robust strains that can tolerate a wide range of temperature and alcohol variables in order to ensure complete, reliable fermentations. In addition, these strains produce highly aromatic white, rosé and red wines.

“ We create groundbreaking and unique yeasts. Let us do the same for your wine.



Groundbreaking innovation milestones

ANCHOR YEAST

EXOTICS

Original & exciting

Our yeast strains are as unique and special as the wines they produce.

INNOVATION MILESTONE

The world's first interspecies hybrid wine yeast strains.

- Exotics Mosaic
- Exotics Novello

EXOTIC NOTES IN YOUR WINE

Enhance the benefits

- Complexity
- Mouthfeel
- Palate weight
- Enhanced aroma profile
- Complete fermentation

Reduce the risks

- Stuck fermentation
- Off-flavours
- Volatile acidity

The concept behind these unique hybrids is to provide you with all the benefits and complexity of a spontaneous fermentation, without the associated risks. Now Exotics will be known as a range of yeast strains, consisting of the world's first interspecies hybrid, Exotics Mosaic, and more recently, the addition of Exotics Novello.

Exotics Mosaic

A unique hybrid of *S. cerevisiae* and *S. paradoxus*, created in South Africa. Exotics Mosaic provides a steady fermentation rate in barrels and prefers at least 18 °C fermentation temperature.

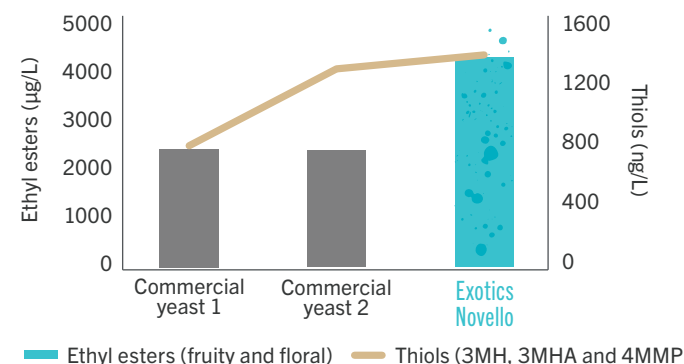
- **White wine:** Guava, granadilla, grapefruit, tropical fruit salad and stone fruit aromas.
- **Rosé wine:** Tropical fruit profile with intense mouthfeel.
- **Red wine:** Fruity, violet and cocoa aroma and flavours.

Exotics Novello

A unique hybrid of *S. cerevisiae* and *S. cariocanus*, created in Australia. Exotics Novello provides a steady fermentation rate even at lower fermentation temperatures of 15 °C.

- **White wine:** Fresh and fruity, with enhanced softness and high ester and thiol production.
- **Rosé wine:** Increased thiols with enhanced mouthfeel.
- **Red wine:** Full-bodied and aromatic, with red and black fruit and spicy aromas, as well as decreased green characters.

Aroma impact of Exotics Novello in Sauvignon blanc.



ANCHOR YEAST

ALCHEMY

Magical process of transforming

**Creating synergy ...
You blend your wine and
create art. We blend our
yeast strains and create
the exceptional.**

INNOVATION MILESTONE

The world's first scientifically formulated wine yeast blends.

For white wine:

- Alchemy I
- Alchemy II

For red wine:

- Alchemy III
- Alchemy IV

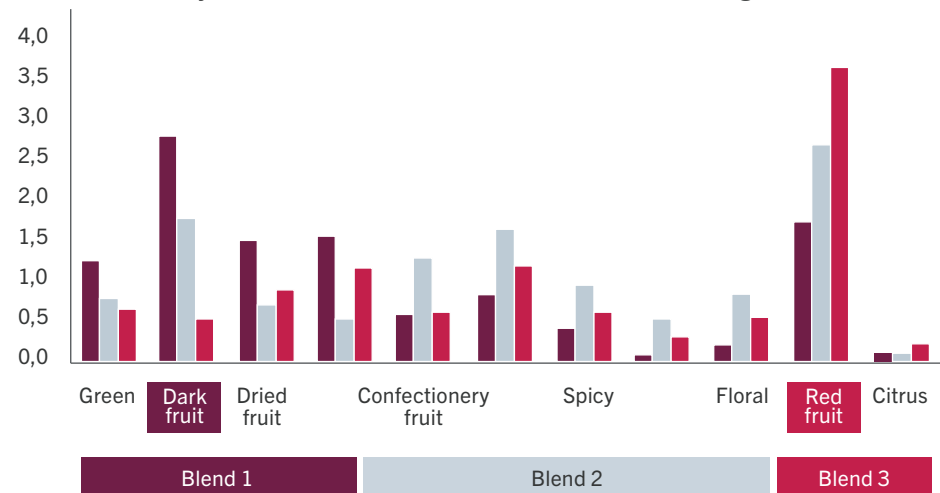
ALCHEMY NOTES IN YOUR WINE

- Fruity esters
- Volatile thiols
- Complexity
- Intense red fruit

Anchor Yeast is the first wine yeast brand in the world to launch commercial yeast blends to enhance wine aroma based on the metabolic interaction between specific yeast strains present in the blend, rather than the cumulative effect of the individual strains. Based on this research, in collaboration with the Australian Wine Research Institute (AWRI), Anchor has developed four yeast blends for the increased aromatic intensity, flavour and complexity of white and red wines.

The Alchemy I, II, III and IV yeast blends are highly robust strains that can withstand the rigours and challenges of modern winemaking, including temperature, alcohol and sugar tolerance.

Blend 1, 2 and 3 contain the exact same three yeast strains, with only the ratio of individual strains in the blend being different.



DEVELOPING THE ALCHEMY RANGE

The development of the Alchemy range was based on the following steps:

- Select and analyse the individual strains for their impact on the ethyl and acetate ester, thiol and monoterpene concentrations.
- Analyse a variety of blends for their impact on the wine profile.
- Perfect the ratio of the individual strains in the blend.

ALCHEMY WINE YEAST BLENDS FOR WHITE WINES

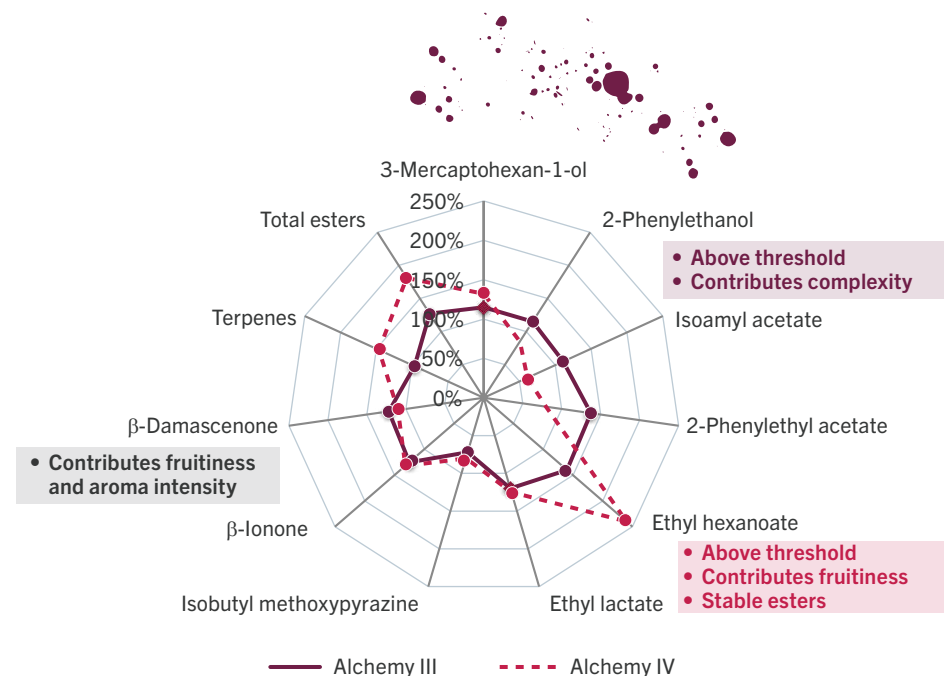
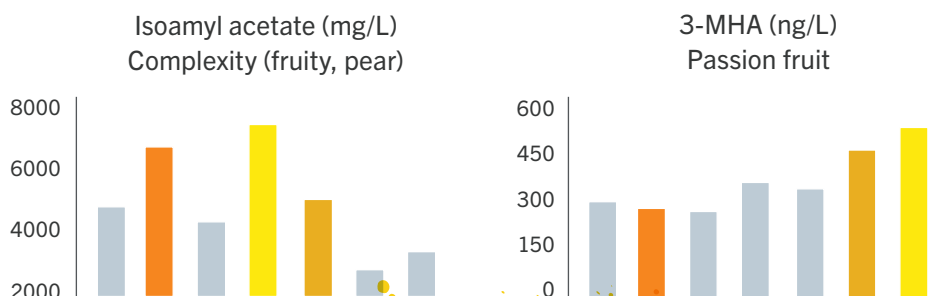
Alchemy I

- Fruity and floral esters.
- Tropical fruit aromas.
- Some volatile thiols.
- Cold fermentation.
- Very high alcohol tolerance.

Alchemy II

- Volatile thiols.
- 3-MH, 3-MHA and 4-MMP.
- Boxwood, passion fruit, grapefruit, gooseberry and guava aromas.
- Cold fermentation.
- Very high alcohol tolerance.

Identifying individual strains capable of enhancing the ester and thiol concentration:



ALCHEMY WINE YEAST BLENDS FOR RED WINES

Alchemy III

- Rose, floral and fruity.
- Raspberry.
- Decreased green methoxypyrazines.
- Structure and body.

Alchemy IV

- Significant production of esters and terpenes.
- Strawberry, cherry, raspberry, red-currant and pomegranate.
- Longevity/stability of fruit aromas.
- Decreased green methoxypyrazines.
- Round and smooth.

ANCHOR YEAST

LEGACY

Handed down from generation to generation

“Our yeast strains that help you to create your legacy - always dependable and reliable, like family.”

INNOVATION MILESTONE

The world's first hybrid wine yeast strain.

For white wine:

- VIN 2000
- VIN 13
- NT 116

For red wine:

- NT 116
- NT 112
- NT 202

LEGACY NOTES IN YOUR WINE

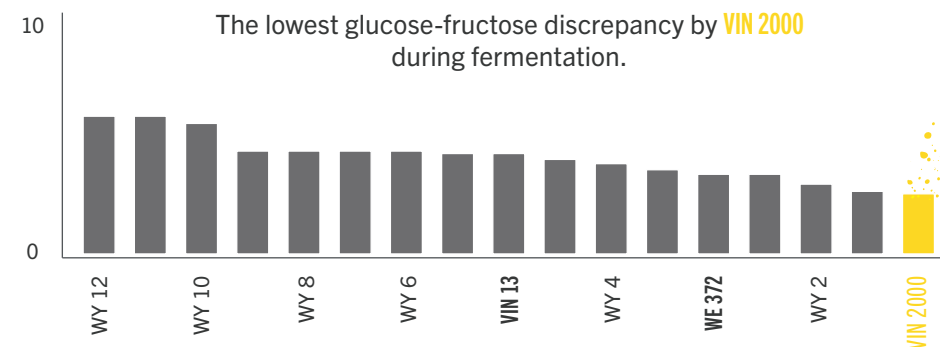
- Aroma & security
- Fruitiness & robustness

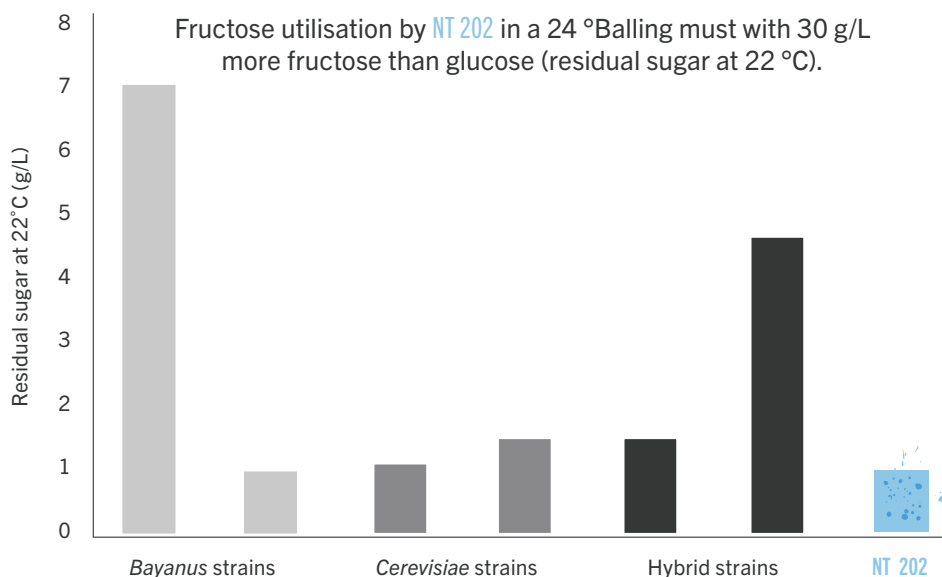
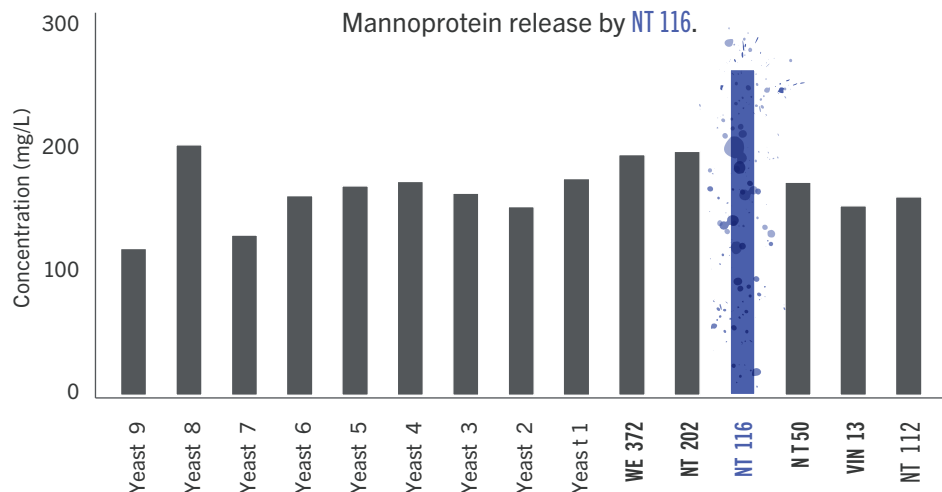
VIN 2000

- Barrel and tank fermented Chardonnay, Chenin blanc and Viognier.
- High quality, full bodied wines with good mouthfeel.
- Enhances fresh pineapple, papaya, grapefruit and citrus aromas.
- Low temperature tolerance: tank and barrel suitability (12 °C).
- Tropical citrus aromas.
- High alcohol tolerance and extremely fructophilic.

VIN 13

- Cold fermentation of aromatic white wines.
- Robust and aromatic: fresh and fruity.
- Strong and fast fermentation.
- Cold tolerant (10 °C).
- Extremely alcohol tolerant (17%)
- Red wine fermentations (sugar exceeding 26 °Balling).
- Restarting stuck fermentations.
- Extremely sugar tolerant (27 °Balling).





NT 116

- Production of aromatic, crisp white wines.
- Production of full-bodied red wines destined for barrel maturation.
- High sugar and alcohol tolerance.
- Cold tolerance: suitable for cold maceration in red wines.
- Strong fermenter, even at very low temperatures in white wines.
- High ester production, intense tropical aromas.
- Highest glycerol and mannoprotein production.

NT 202

- Production of structured red wines to be aged, more intense and complex.
- Red and black fruits (blackberry and blackcurrant), tobacco, fresh prune/ plum aromas.
- High alcohol tolerance (26 °Balling).
- Very good fructose utilisation.
- Very stimulatory for MLF.

NT 112

- Production of red wines with a firm tannin structure.
- Traditional style red wines to be aged.
- Blackberry and blackcurrant aromas in Cabernet Sauvignon and Shiraz.
- High alcohol tolerance.
- Very good fructose utilisation.
- Can produce SO₂ under stress conditions (sufficient nutrition).
- Suitable for micro-oxygenation and thermovinification.

ANCHOR YEAST LEGACY

Reliable and Trustworthy



You don't settle for one cultivar or one style of wine. Why settle for one yeast strain? With Anchor, the choice is yours.

RED WINE YEAST STRAINS

NT 116

Enhanced mouthfeel

- Enhanced glycerol and mannoprotein release.
- Varietal aroma characters.

NT 112

Firm tannin structure

- Blackberry and blackcurrant.
- Good fructose utilisation.

NT 202

MLF compatibility

- Easy to use with any LAB.
- Complex and quality red wines.
- Mature red and black fruit.

WHITE WINE YEAST STRAINS

VIN 2000

Complexity in tank and barrel

- Fruity and floral characters.
- Hints of citrus.

VIN 13

Versatility and robustness

- Intensely aromatic wines.
- Reliable fermentations.

NT 116

Crispness and freshness

- Enhanced varietal aromas.
- High glycerol and mannoprotein release.



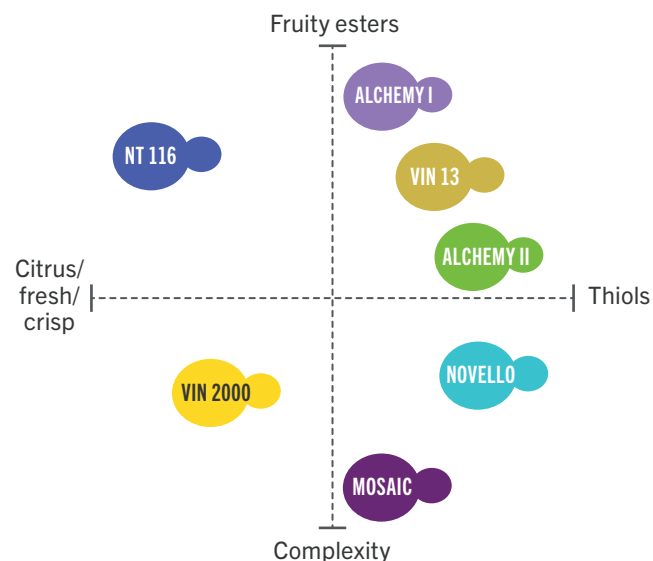
RED WINES | Yeast technical characteristics

	EXOTICS		ALCHEMY		LEGACY		
	MOSAIC	NOVELLO	ALCHEMY III	ALCHEMY IV	NT 116	NT 112	NT 202
Application	Iconic wines	Iconic wines	Complex wines	Intense red fruit	Full-bodied wines	Firm tannin structure	Structured wines
Also suitable for rosé	✓	✓		✓	✓		
Blend			✓	✓			
Hybrid	✓	✓			✓	✓	✓
Fructophilic	✓					✓	✓
Cold tolerance	18°C	15°C	16°C	16°C	11°C	20°C	18°C
Alcohol tolerance	15.5%	15.5%	15.5%	15.5%	15.5%	15.5%	16%
Osmotolerance (g sugar/L)	250	250	260	260	260	260	260
Nitrogen demand	Average	Average	Average	Average	Low	Average	Average
MLF compatibility	+++	++	++	++	++	+	+++
Sensory descriptors	Red fruit Black fruit Cocoa Floral	Soft tannins Red and black fruit Spice	Rose Floral Fruity Structure and body	Intense fruit Red fruit Round and smooth Decreased greenness	Blackberry Blackcurrant Red berries	Structured Blackberry Blackcurrant	Blackberry Blackcurrant Tobacco Prune Red berries

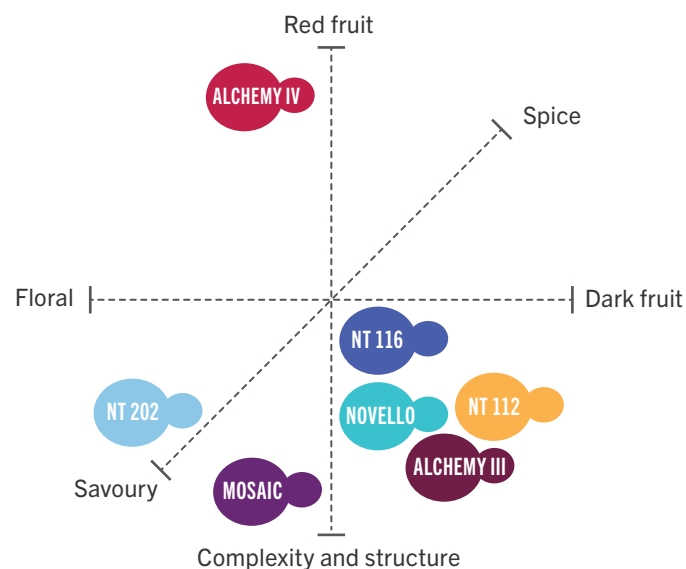
WHITE WINES | Yeast technical characteristics

	EXOTICS		ALCHEMY		LEGACY		
	MOSAIC	NOVELLO	ALCHEMY I	ALCHEMY II	VIN 2000	VIN 13	NT 116
Application	Iconic	Iconic production	Ester production	Thiol wines	Complex wines	Fruity wines	Crisp wines
Also suitable for rosé	✓	✓				✓	✓
Blend			✓	✓			
Hybrid	✓	✓			✓	✓	✓
Restart stuck fermentation						✓	
Fructophilic	✓				✓	✓	
Cold tolerance	18°C	15°C	12°C	12°C	12°C	10°C	11°C
Alcohol tolerance	15.5%	15.5%	15.5%	15.5%	15.5%	17%	16%
Osmotolerance (g sugar/L)	250	250	250	250	250	270	260
Nitrogen demand	Average	Average	Average	Average	Low	Low	Low
Sensory descriptors	Exotic fruits Stone fruits Floral Mouthfeel	Grapefruit Guava Passion fruit Gooseberry Fresh and fruity	Fruity Floral	Passion fruit Guava	Floral Citrus Tropical Pineapple Papaya	Fruity Floral Terpenes Muscat	Tropical fruits Citrus Thiols

Anchor strains for the production of white wines



Anchor strains for the production of red wines



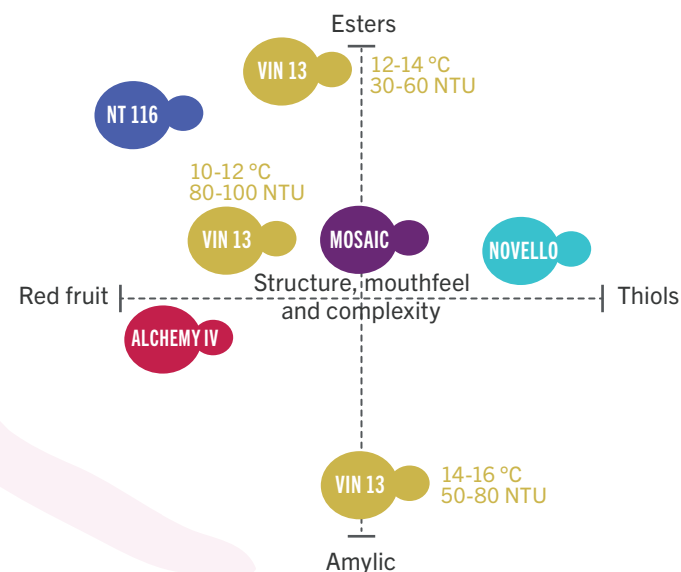
ROSÉ WINE IN THE SPOTLIGHT

One of the global wine industry developments is the growth of complex, sophisticated, dry aromatic-style rosé wines.

- In 2019, rosé wine sales accounted for 9% of worldwide wine sales.
- Globally, still rosé wine consumption has steadily grown by approximately 30% over the last 15 years.
- France, Spain, USA and Italy are the biggest rosé wine producers, with a dramatic increase in production in Australia, Chile and South Africa.
- France is still the largest rosé wine consumer, but consumption is growing by 40% per year in the US market. In addition, rosé wine sales are set to increase by more than 36% in 2020.
- Trends that are on the increase in the rosé wine market include the following: rosé cider and canned rosé wine.

Anchor does not focus on cultivar related wines, but rather product offerings that are in line with a desired wine style a winemaker would like to achieve. In this way, utilising a specific yeast can be advantageous to create a specific rosé wine style.

Anchor strains for the production of rosé wines



03 | BACTERIA

“Expect more from your malolactic fermentation? So do we.

SOLO SELECT

Oenococcus oeni bacteria

We would like to introduce you to a brand new member of the Anchor family, the Solo bacteria range, designed specifically for sequential inoculation. This allows us to bring you a complete portfolio, with all the products focused on quality-enhancing malolactic fermentation (MLF).

The new product, Solo Select, was developed in collaboration with the Australian Wine Research Institute and consists of a robust *Oenococcus oeni* strain isolated from the Yarra Valley in Australia. In keeping with our aim of providing you with bacteria products that enhance the sensory profile of the wine during MLF, Solo Select will enhance the spicy notes and palate structure of red wines. These aroma-enhancing capabilities are supported by the robust fermentation ability of the strain.

- Recommended for use in red wines.
- Displays good implantation and efficient fermentation kinetics.
- Tool for overcoming difficult MLF conditions.
- Enhances structure and complexity.
- Enhances spicy and dark fruit notes.
- Low volatile acidity production.
- Late degradation of citric acid and thus low diacetyl production.
- No production of biogenic amines.
- Can be used for both co-inoculation and sequential inoculation.



WHY SEQUENTIAL INOCULATION WITH SOLO?

- Security
- Sequential inoculation benefits
- Speedy MLF
- Impact on volatile acidity
- Impact on diacetyl
- Sensory benefits

SECURITY

A robust *O. oeni* strain ensures a secure, complete MLF, even under challenging conditions.

	General <i>O. oeni</i> characteristics	Solo Select
pH	2.9 - 4	≥ 3.2
Ethanol tolerance	16%	≤ 16%
Temperature tolerance	12 - 30°C	≥ 14°C
TSO ₂ tolerance	50 - 60 ppm	≤ 50 ppm
VA production	Minimal to high levels	Minimal
Aroma impact	Enhance	Enhance

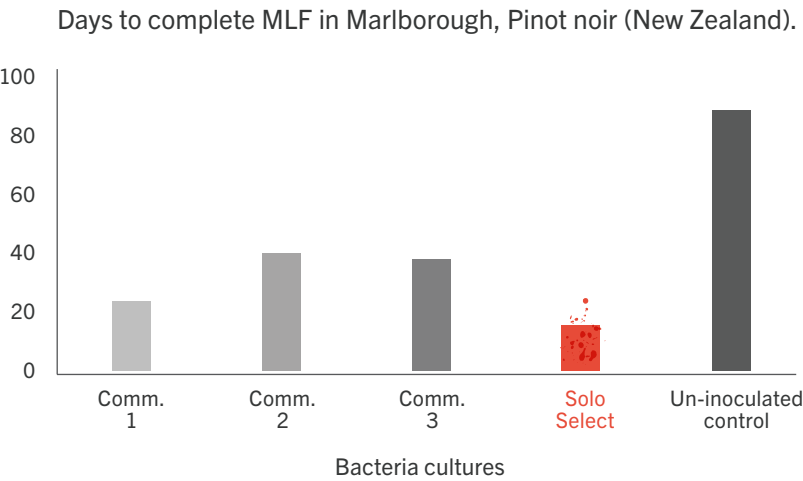
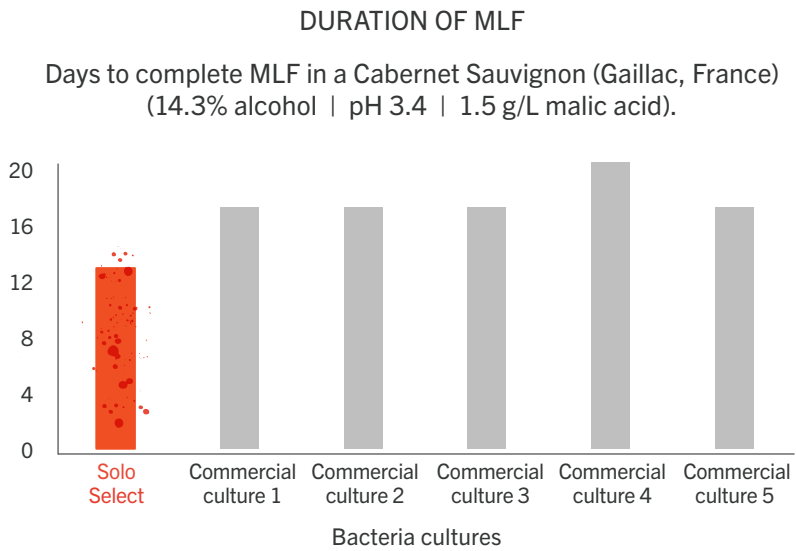
SEQUENTIAL INOCULATION BENEFITS

- Eliminate potential adverse interactions between the lactic acid bacteria and yeast cultures and avoid stuck or sluggish fermentations.
- Reduce the risk of the yeast producing undesirable metabolites if negatively impacted by the bacteria.
- Logistically easier to manage two fermentation processes separately.
- Decreased risks of volatile acidity production by the bacteria.
- Reduce the potential negative impact on colour.

SPEEDY MLF

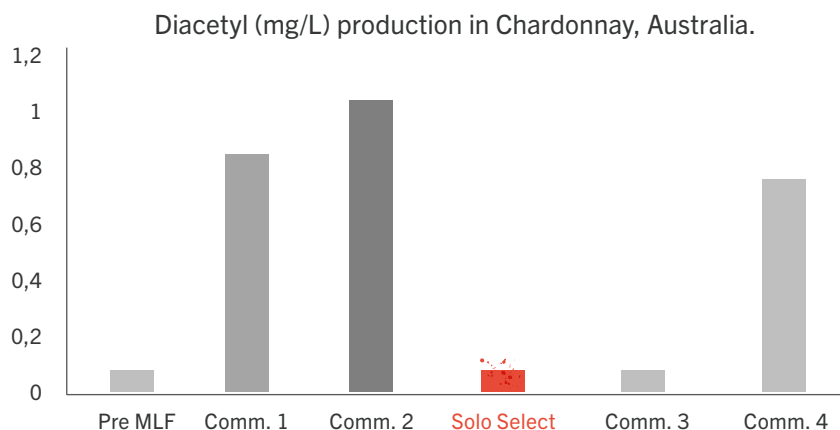
Solo Select is a robust *O. oeni* strain that ensures a speedy and complete MLF.

A comparison of the malolactic fermentation duration during sequential inoculation comparing Solo Select with five commercial *O. oeni* cultures:



IMPACT ON VOLATILE ACIDITY AND DIACETYL PRODUCTION

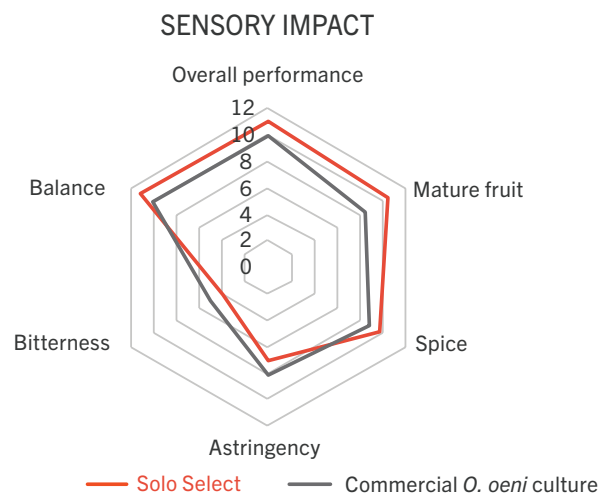
Solo Select is specifically selected for its ability to degrade citric acid at a much later stage in the MLF. This results in low diacetyl and volatile acidity levels.



SENSORY BENEFITS

Solo Select enhances the following sensory characteristics in red wine: structure, complexity, spice and dark fruit aromas.

A comparison of Solo Select and a commercial *Oenococcus oeni* culture in Merlot (Bordeaux, France):



SOLO SELECT

Solo Select enhances complexity in red wines during malolactic fermentation.

Application

- Red wine

Aroma attributes

- Enhanced structure
- Increase in spice characters
- More complexity
- Darker fruit aromas

Technical parameters

- pH: ≥ 3.2
- Potential alcohol tolerance: 16%
- Temperature range: $\geq 14^{\circ}\text{C}$
- Total SO_2 at inoculation: ≤ 50 ppm
- No biogenic amine production
- Little to no VA production
- Fast fermentation kinetics
- Cinnamyl esterase negative: no formation of ethyl phenol precursors



04 | CONTACT US



Anchor
OENOLOGY

Dedicated to fermentation excellence



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