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

For many years, Anchor has been at the forefront of evolution, adapting and changing to fulfill 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.
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.
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.

<table>
<thead>
<tr>
<th>Aroma Compound</th>
<th>Commercial Yeast 1</th>
<th>Commercial Yeast 2</th>
<th>Exotics Novello</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl esters (µg/L)</td>
<td>2000</td>
<td>2000</td>
<td>5000</td>
</tr>
<tr>
<td>Thiols (ng/L)</td>
<td>5000</td>
<td>5000</td>
<td>1200</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Aroma Compound</th>
<th>Commercial Yeast 1</th>
<th>Commercial Yeast 2</th>
<th>Exotics Novello</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl esters (µg/L)</td>
<td>2000</td>
<td>2000</td>
<td>5000</td>
</tr>
<tr>
<td>Thiols (ng/L)</td>
<td>5000</td>
<td>5000</td>
<td>1200</td>
</tr>
</tbody>
</table>
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.
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.

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.

ALCHEMY WINE YEAST BLENDS FOR RED WINES

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

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.
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).

The lowest glucose-fructose discrepancy by VIN 2000 during fermentation.
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.
**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

<table>
<thead>
<tr>
<th>Application</th>
<th>Iconic wines</th>
<th>Iconic wines</th>
<th>Complex wines</th>
<th>Intense red fruit</th>
<th>Full-bodied wines</th>
<th>Firm tannin structure</th>
<th>Structured wines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Also suitable for rosé</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blend</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hybrid</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Fructophilic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold tolerance</td>
<td>18°C</td>
<td>15°C</td>
<td>16°C</td>
<td>16°C</td>
<td>11°C</td>
<td>20°C</td>
<td>18°C</td>
</tr>
<tr>
<td>Alcohol tolerance</td>
<td>15.5%</td>
<td>15.5%</td>
<td>15.5%</td>
<td>15.5%</td>
<td>15.5%</td>
<td>15.5%</td>
<td>16%</td>
</tr>
<tr>
<td>Osmotolerance (g sugar/L)</td>
<td>250</td>
<td>250</td>
<td>260</td>
<td>260</td>
<td>260</td>
<td>260</td>
<td>260</td>
</tr>
<tr>
<td>Nitrogen demand</td>
<td>Average</td>
<td>Average</td>
<td>Average</td>
<td>Average</td>
<td>Low</td>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>MLF compatibility</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensory descriptors</td>
<td>Red fruit</td>
<td>Black fruit</td>
<td>Rose Floral</td>
<td>Intense fruit Red fruit</td>
<td>Blackberry Blackcurrant</td>
<td>Blackberry Blackcurrant</td>
<td>Blackberry Blackcurrant</td>
</tr>
<tr>
<td></td>
<td>Cocoa Floral</td>
<td>Fruity Structure and body</td>
<td>Round and smooth Decreased greenness</td>
<td>Black currant Red berries</td>
<td></td>
<td>Tobacco Prune Red berries</td>
<td></td>
</tr>
</tbody>
</table>
# WHITE WINES | Yeast technical characteristics

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

**SOLO SELECT**

*Oenococcus oeni* bacteria
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.

<table>
<thead>
<tr>
<th>General <em>O. oeni</em> characteristics</th>
<th>Solo Select</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>2.9 - 4</td>
</tr>
<tr>
<td>Ethanol tolerance</td>
<td>16%</td>
</tr>
<tr>
<td>Temperature tolerance</td>
<td>12 - 30°C</td>
</tr>
<tr>
<td>TSO₂ tolerance</td>
<td>50 - 60 ppm</td>
</tr>
<tr>
<td>VA production</td>
<td>Minimal</td>
</tr>
<tr>
<td>Aroma impact</td>
<td>Enhance</td>
</tr>
</tbody>
</table>

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:

**DURATION OF MLF**

Days to complete MLF in a Cabernet Sauvignon (Gaillac, France) (14.3% alcohol | pH 3.4 | 1.5 g/L malic acid).

Days to complete MLF in Marlborough, Pinot noir (New Zealand).
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: ≥ 14°C
- Total SO₂ 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

**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):

**SENSORY IMPACT**
Overall performance
- Balance
- Bitterness
- Mature fruit
- Spice
- Astringency

**Diacetyl (mg/L) production in Chardonnay, Australia.**
CONTACT US

WWW.SCOTTLAB.COM
• 1480 Cader Lane, Petaluma, CA 94954
  707-765-6666 | info@scottlab.com

WWW.OENOBRANDS.COM
CONTACT PERSON
• Anchor International Product Manager:
  Elda Binneman | +27 (0)82 903 0694 | elerm@anchor.co.za