INGREDIENTS
FOR EXCEPTIONAL **SPARKLING WINE**

2025 Catalogue

Featuring products from our extensive Pinnacle and Maurivin ranges

AB Biotek
PARTNERS IN FERMENTATION™

A business division of AB MAURI

AB Biotek has selected a range of products best suited to help you produce top quality sparkling wines.

SPARKLING WINE METHODS

Sparkling wine can be produced by several different methods. Production can be complex because of the need for two different fermentations: one to make the wine and the second one to make the bubbles!

AB Biotek products can help you to produce unique, quality sparkling wine regardless of the method you use. There are basically five methods by which sparkling wines are produced:

- **Traditional method**
- **Tank method**
- **Transfer method**
- **Ancestral method**
- **Carbonation method**

1 TRADITIONAL METHOD

The most premium and costliest method, where the second fermentation occurs entirely inside the bottle. Base wine (Cuvée) is made by picking Pinot Noir or Chardonnay grapes a bit younger to still have a lot of acidity and produce lower alcohol levels. The base wine has yeast and sugar added then is bottled in sparkling wine bottles and capped with crown caps.

The second fermentation in the bottles adds just over 1% of alcohol and creates trapped CO_2 in the bottles. Over time the yeast starts to die and autolyse. Wines are aged on these yeast lees to create a yeasty sparkling wine flavour.

Clarification is by a method called riddling, where bottles are kept upside down so the yeast collects on top of the crown, then the bottle neck is frozen, and when opened, the frozen chunk of yeast shoots out of the pressurized bottles.

A mixture of sugar and wine (dosage liqueur) is added to fill the bottles and then they are corked and wired. This method normally offers complex taste with notes of citrus, almond, and brioche.

2 TANKED METHOD (CHARMAT METHOD)

This is the main method used for producing Prosecco and Lambrusco sparkling wines. Instead of in the bottles, the second fermentation occurs in a large fermentation tank. The CO_2 produced builds up pressure in the tank and the wine is filtered, dosage liqueur added and then bottled under pressure without the traditional aging part, thus removing a lot of bottle handling labour.

This type of sparkling wine is normally light, fruity, and floral, with primary flavours of green apple, honeydew, and cream.

3 TRANSFER METHOD

Identical to the traditional method except the bottles are emptied into a pressurised tank and filtered through pressurised filters to remove the yeast lees.

4 ANCESTRAL METHOD

The primary fermentation is stopped mid-way by cooling down the fermentation process, then kept for a period of time in a cold fermentation tank. The wine is then bottled and fermentation finishes, trapping the CO_2 in the bottle. When the desired CO_2 levels are reached, the wine is chilled again to stop the fermentation and the wines are riddled and disgorged as with the traditional method, but without adding sugar and wine. This was the earliest method of producing sparkling wine.

5 CARBONATION METHOD

In this method, mostly fruity wine is just carbonated and bottled. These types of sparkling wines are usually sweet.

BASE WINE PRODUCTION

The first step in sparkling wine production is creating a base wine. The quality of sparkling wines heavily depends on the careful preparation of this base, starting with the selection of specific grape blocks.

KEY STEPS:

Grape Selection:

- Whole bunches are hand-picked early in the season.
- Mechanisation is often avoided to prevent early oxidation, undesired colour and phenolic extraction.
- The extraction of phenolic compounds can affect foaming, cause bitterness and reduce aging capacity.

Pressing:

- It's ideal to press whole bunch grapes instead of destemmed grapes.
- Winemakers look for high acid and minimal ripeness for most sparkling wines.

TRADITIONAL CHEMISTRY OF BASE WINES:

Brix: 17.5-20° (approx. 10-11% alcohol)

pH: 2.9-3.2

Total Acidity: 10-14 g/L

COMMON GRAPE VARIETIES:

Traditional: Chardonnay, Pinot Noir, Petit Meunier.

Non-traditional: Sauvignon Blanc, Chenin Blanc, Cabernet.

JUICE PROCESSING:

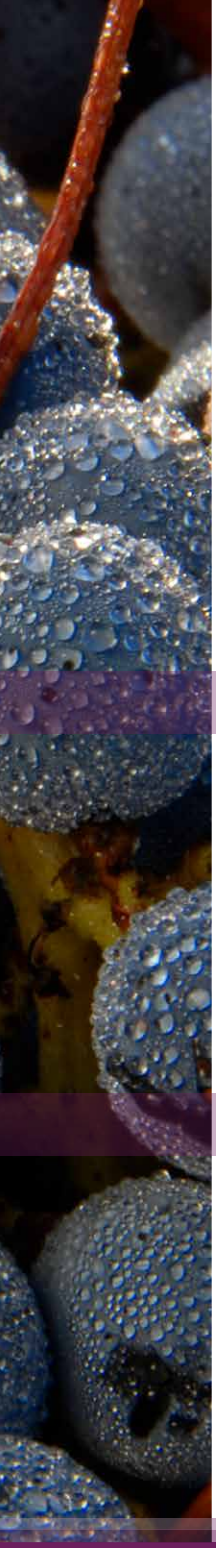
Factors Influencing Quality:

- Juice temperature
- Grape extraction
- Clarity

Nutrient Supplementation: Important during primary fermentation to maintain quality.

Press Fractions: Whole bunch pressing yields the different press fractions used to produce the base wines.

Fermentation: Usually takes place in stainless steel tanks. Partial fermentation and/or aging can occur in new or used barrels for added complexity.



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Product Catalogue

USE OF INGREDIENTS IN WINE PRODUCTION

Winemakers use technology-driven ingredients to turn grapes into wine, to stabilise, and to enhance aroma and flavour, thus ensuring consistent quality despite the natural variability in grapes and the winemaking process.

BIOPROTECTION

Bioprotection aims to preserve the quality of grapes and must by protecting them from oxidation and development of undesirable microorganisms.

PINNACLE™

PINNACLE AWRI BIOPROTECT

Metschnikowia pulcherrima species.

- Broad antimicrobial spectrum.
- Can be added directly onto harvested grapes.
- Dosage: 20g/ton of grapes.

ENZYMES - EXTRACTION

Enzymes are naturally occurring proteins that act as catalysts, increasing the rate of reactions without being changed themselves. They are often used to improve the quality of the final product and the winemaking process.

PINNACLE™

PINNACLE ZYM WHITE EXTRACT

- Using this enzyme maximises juice extraction with shorter pressing cycles and higher juice yields.
- Type: Enzyme to maximise juice and aroma extraction.
- Dosage: For short skin contact as for sparkling wine: 5mL/100kg.

ENZYMES - CLARIFICATION

MAURIZYM WHITE XP

- This enzyme should be used to reduce juice viscosity, improve flotation efficiency and in compacting the lees during the clarification phase.
- Type: A stable and extremely efficient liquid pectinase with side activities.
- Dosage: 1-2mL/hL.

MAURIZYM PECTINASE 4X

- A highly concentrated multi-purpose pectinase that can improve flotation and clarification and increase yield.
- Type: A very stable concentrated pectinase enzyme.
- Dosage: 0.5mL/hL.

PINNACLE ZYM CLARIFY+

- Pinnacle Zym Clarify+ enables quick depectinisation of must.
- Reduces viscosity and turbidity of must even in difficult settling conditions.
- Type: Pectolytic enzyme preparation for quick clarification.
- Dosage: 2-3mL/hL.

PINNACLE ZYM FLOT

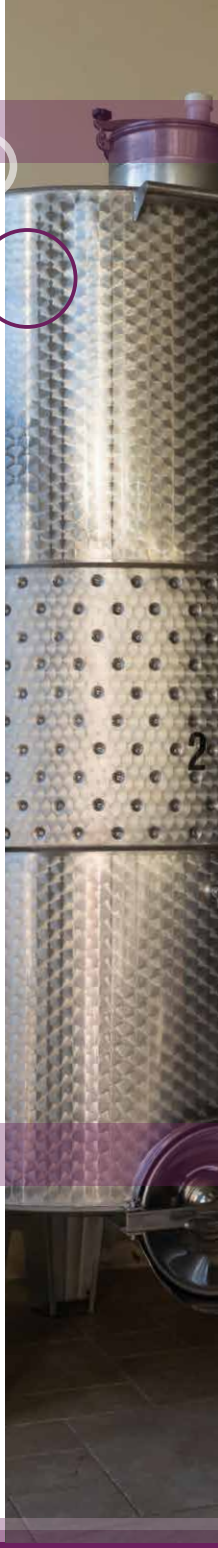
- A pectinase that enables faster flotation.
- Type: Enzyme for rapid flotation.
- Dosage: 3-6mL/hL.

TANNIN PROTECTION

Adding SO_2 and other compounds can prevent browning and preserve aromatics.

PINNACLE NATURA TAN

- Pinnacle Natura Tan provides a stable antioxidative environment for base wine.
- It releases sweet and complex soft tannins, enhancing fruity flavours.
- Type: Ellagic tannin from Limousine oak.
- Dosage: 1-10g/hL.



Primary Fermentation

TRADITIONAL AND NEUTRAL AROMA

maurivin™

MAURIVIN PDM

Strong fermenting all-purpose yeast

Saccharomyces cerevisiae var bayanus

- Sensory: Neutral sensory contribution allows varietal character to dominate.
- Application: All base wine applications especially *Méthode Champenoise* wine styles.
- Dosage: 20-30g/hL.

NEUTRAL AROMA

maurivin™

MAURIVIN POP

Robust yeast for respecting varietal characters

Saccharomyces cerevisiae

- Sensory: Clean and subtle aromas like apple.
- Application: All base wine fermentations for both *Méthode Champenoise* and Charmat methods.
- Low SO_2 production.
- Dosage: 20-30g/hL.

PINNACLE™ WINE YEAST

PINNACLE BUBBLY

High alcohol tolerance, low foaming strain

- Sensory: Subtle but positive fruity aromas consistent with high quality sparkling wines.
- Application: All base wine fermentations for both *Méthode Champenoise* and Charmat methods.
- Low SO_2 production.
- Dosage: 20-30g/hL.

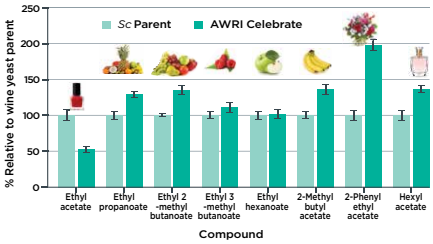
AROMATIC

maurivin™

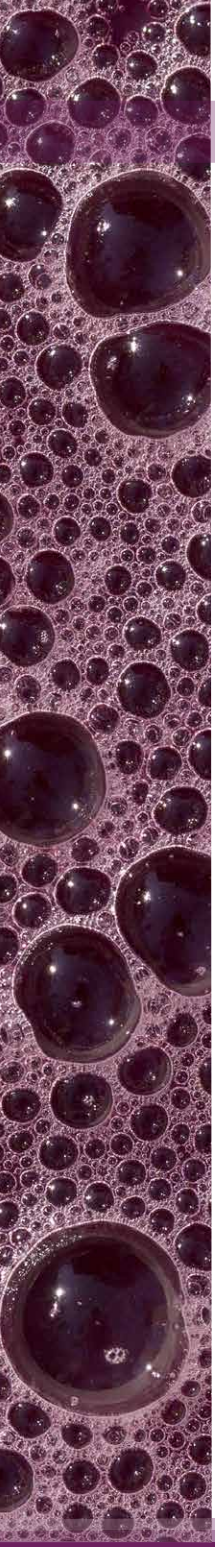
MAURIVIN AWRI CELEBRATE

Fruity white wines with pleasant biscuit and brioche aromas

- Sensory: Enhances aroma and mouthfeel with fruity, strawberry, and floral notes, along with pleasant biscuit and brioche aromas typical of premium sparkling wines.
- Dosage: 20-30g/hL.



Yeast-derived volatile flavour-active metabolite comparison of AWRI Celebrate and the *S. cerevisiae* parent in Chardonnay wines (courtesy of Dr. Jenny Bellon, The Australian Wine Research Institute).



YEAST

AROMATIC

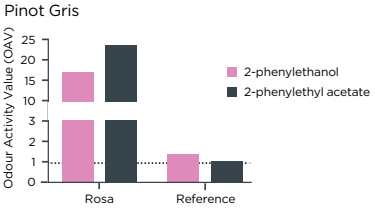
maurivin™

MAURIVIN AWRI ROSA

Aromatic white and rosé base wines

Saccharomyces cerevisiae.

- Selected for its capability to produce elevated levels of 2-phenylethanol and 2-phenylethyl acetate.
- Sensory: Rose petal, Turkish delight, and floral aromas.
- Dosage: 20-30g/hL.



Odour activity value of 2-phenylethanol and 2-phenylethyl acetate relative to the odour threshold of each compound. Fermentations were conducted at the Hickinbotham Roseworthy Wine Science Laboratory in Adelaide, Australia.

AROMATIC

maurivin™

MAURIVIN ELEGANCE

White base wines with fruity floral esters

- Sensory: Enhanced varietal character with fruity and floral notes.
- For all white varieties.
- Favours the consumption of fructose toward the end of fermentation.
- Dosage: 20-30g/hL.

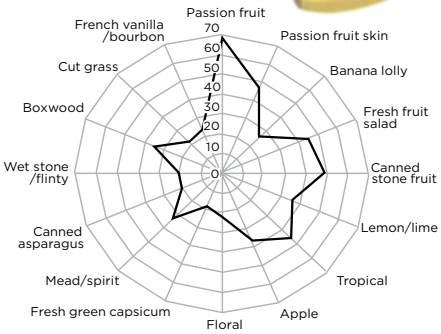
AROMATIC

maurivin™

MAURIVIN UOA MAXITHIOL

White base wines with volatile thiols

- Sensory: Some passion fruit, tropical salad, and stone fruit.
- For white, thiolic varieties.
- Dosage: 20-30g/hL.



AROMATIC

PINNACLE™ WINE YEAST

PINNACLE CRYO

Aromatic and fruity white base wines

- A highly cryophilic strain.
- Varietal white wines with enhanced ester expressions.
- Sensory: At low temperatures 10-13°C (50-55°F) it produces more banana (isoamyl acetate) type fruit and at 16-18°C (61-64°F) more white stone fruit.

NUTRIENTS

It is very important to correctly manage the nutrient requirements of the fermenting yeast in the primary fermentations. This will help to enhance the sensory profiles and reduce the risks for off-flavour production such as sulphur compounds.

During rehydration of the yeast, it requires amino acids and micronutrients to ensure strong, robust, and resistant yeast cells. Due to the challenging conditions during the fermentation (acidic environment) it is important that the yeast has access to essential vitamins, minerals, sterols, and nitrogen.

Glutathione containing nutrients can result in greater oxidative protection, especially in lower phenolic containing wines. Glutathione can play an important role in sparkling wine production due to its ability to reduce SO_2 usage.

PINNACLE™

PINNACLE FERMIFRESH

Aroma and colour protection

- An organic nutrient rich in glutathione, protecting the wine against browning and oxidation.
- Gradual release of amino acids, unsaturated fatty acids, sterols and other growth factors enable complete and safe fermentation.
- Wines show better resistance to oxidation during ageing, with fresher aromas and brighter colour.
- Add right at the start of fermentation for aroma protection.
- Composition: Specially selected inactivated yeast rich in glutathione.
- Dosage: 20-30g/hL.

mauriferm™

MAURIFERM ACTIVATOR

Rehydration aid

- Inactive yeast that supplements the essential ingredients for yeast fermentation, promoting strong yeast growth and reducing stuck fermentations.
- Composition: Inactivated yeast.
- Dosage: 0.3g/L.

mauriferm™

MAURIFERM PLUS

Complete fermentation and quality yeast performance

- A unique fermentation aid containing inactive dry yeast, thiamine, and di-ammonium phosphate.
- Mauriferm Plus improves fermentation by removing toxic fatty acids and providing nitrogen.
- Only add after a third of the fermentation has been completed.
- Composition: Inactivated yeast, DAP, and thiamine.
- Dosage: 30g/hL at approximately 1/3 of fermentation complete.

MANNOPROTEINS

Mannoproteins can be added to help with tartaric stabilisation and improve the mouthfeel and flavour of the wine. They have an impact on the astringency and bitterness of the wine.

PINNACLE™

PINNACLE FERM MP

To improve the mouthfeel and provide nutrition to the yeast

- Inactivated yeast with naturally occurring mannoproteins.
- Produces a fresher aromatic profile.
- Preserves colour and increases mouthfeel.
- Dosage: 20–30g/hL.

PINNACLE™

PINNACLE WINE MP

For a well preserved, stable, long-lasting wine

- Blend of inactivated yeast with high concentration of mannoproteins with some pure selected mannoproteins.
- Contributes to protein and tartaric stabilisation.
- Enhances flavour and roundness of the wine.
- Dosage: 10-20g/hL.

MALOLACTIC FERMENTATION (MLF)

MLF can help soften the high-acid base wines and reduce malic acid for better microbial stability.

MLF can be a tool for the winemaker to achieve a balance of acidity, freshness, mouthfeel, and fruity aromas.

Due to the difficult conditions encountered at the end of alcoholic fementation, it is advisable to do a co-inoculation when the conditions are still favourable.

MLF should be completed before the second fermentation commences as bacteria do not settle during riddling.

PINNACLE™

PINNACLE MLF EXTREME

Stress resistant bacteria

- Pinnacle MLF Extreme is an *Oenococcus oeni* strain that was isolated in an extensive screening of novel bacteria under stressful Malolactic fermentation conditions.
- Selected for its ability to tolerate low pH conditions and low temperature environments.
- Sensory: Produces clean fruit aromas with hints of spice and vanilla.
- Dosage: 1g/hL.

Secondary Fermentation

SECONDARY FERMENTATION IN SPARKLING WINE PRODUCTION

This process is usually conducted in the bottle, depending on the method used.

After secondary fermentation, the wine is aged on the lees, with the duration depending on the sparkling wine style or country legislation.

SECONDARY FERMENTATION GOALS:

- Achieve a sparkling wine with about 6 bar pressure (approx. 12g/L of CO_2 at 10°C).
- Ensure about 1 x 10^6 cells/mL for a successful fermentation.

KEY DETAILS:

- Yeast consumes around 24g/L of sugar in this phase.
- This consumption can increase alcohol content by approx. 1.0-1.5% v/v ethanol, depending on the yeast strain.

DESIRED CHEMICAL PARAMETERS FOR BASE WINE:

pH: 3-3.2

Total acidity: > 7g/L

Free SO_2: < 15mg/L

Alcohol: < 11.5%

Tartrate and protein stable.

TIPS FOR SUCCESS:

Gradually acclimatise yeast for the second fermentation conditions.

Use a rehydration nutrient to provide essential vitamins, minerals, and sterols, optimising yeast membrane functionality and resistance to challenging conditions.

NUTRIENTS

Due to the depletion of all the nutrients during the primary fermentation it is important to use a complex nutrient to reduce the risk of a stuck fermentation.

MAURIFERM ACTIVATOR

Optimises the yeast for the second fermentation

- Apply during the yeast rehydration.
- It helps guarantee optimal yeast activity and helps to retain membrane exchange capacity in the high alcohol environment.
- Dosage: 0.3g/L.

MAURIFERM PLUS

Promotes yeast biomass and complete fermentation

- Mauriferm Plus Is a blend of inactivated yeast, DAP, and thiamine (Vitamin B1).
- This nutrient provides all the necessary vitamins, amino acids, sterols, and nitrogen to the nutrient deficit base wine.
- Dosage: 2-5g/hL.

YEAST

Yeast used for the second fermentation must be specifically selected for these types of difficult fermentations, with the following characteristics:

- Alcohol tolerance
- Able to ferment cold
- SO_2 and pressure tolerance
- Autolyse after fermentation
- Able to flocculate and have the desirable carbonation ability

TRADITIONAL AND NEUTRAL AROMA

MAURIVIN PDM

Strong fermenting all-purpose yeast

Saccharomyces cerevisiae var bayanus

- Sensory: Neutral sensory contribution allows varietal character to dominate.
- Application: All base wine applications, especially *Méthode Champenoise* wine styles.
- Suitable for primary and secondary fermentation.
- Dosage: 20-30g/hL.

NEUTRAL AROMA

maurivin™

MAURIVIN POP

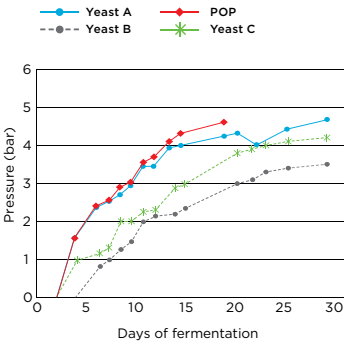
Robust yeast for respecting varietal characters

Saccharomyces cerevisiae.

- Sensory: Clean and subtle aromas.
- Application: All base wine fermentations for both *Méthode Champenoise* and Charmat methods.
- Suitable for primary and secondary fermentation.
- Low SO_2 production.
- Dosage: 20–30g/hL.

TOTAL SO_2 PRODUCTION

Maurivin Pop is considered a low SO_2 producer (generally <20 mg/L total SO_2)



Trials conducted at the University of Padova during the 2016 vintage using Prosecco base DOCG and fermenting at 16°C after 2 bar.

PINNACLE™ WINE YEAST

PINNACLE BUBBLY

High alcohol tolerance, low foaming strain

- Sensory: Subtle but positive fruity aromas consistent with high quality sparkling wines.
- Application: All base wine fermentations for both *Méthode Champenoise* and Charmat methods.
- Low SO_2 production.
- Dosage: 20-30g/hL.

AROMATIC

maurivin™

MAURIVIN AWRI CELEBRATE

Fruity white wines with pleasant biscuit and brioche aromas

Saccharomyces cerevisiae X *Saccharomyces mikatae* hybrid.

- Sensory: Can enhance the aroma and mouthfeel; primary fermentation produces some fruity, strawberry and floral characters, as well as pleasant biscuit and brioche aromas.
- Suitable for primary and secondary fermentation.
- Dosage: 20-30g/hL.

PINNACLE™

PINNACLE ABSOLUTE MP

For immediate results

- A pure mannoprotein fraction.
- Add it to the dosage liqueur after disgorging with the traditional method.
- In the Charmat method, add it to the second fermentation just before bottling.
- Pinnacle Absolute MP provides an obvious sensorial effect, improving the mouthfeel and flavour of the wine.
- Mannoproteins can improve the foaming capacity.
- Dosage: 1-10g/hL.

CONCLUSION

AB Biotek provides an extensive selection of premium products to enhance your sparkling wine production.

Our expertise covers all key methods, from traditional to carbonation, ensuring exceptional quality at every step.

The AB Biotek range includes bioprotection, enzymes, tannins, specialised yeasts, nutrients, and finishing tools to excel in every phase from juice extraction to secondary fermentation.

By choosing AB Biotek, you benefit from:

INNOVATIVE PRODUCTS:
Cutting-edge solutions tailored for sparkling wine production.

ENHANCED QUALITY:
Improved stability, mouthfeel, flavour, and overall wine quality.

TECHNICAL EXPERTISE:
Expert support to help you achieve outstanding results.

Select AB Biotek for superior sparkling wines that reflect your commitment to quality and innovation. We are trusted by winemakers globally.

For more info or technical help contact AB Biotek at **wineinfo@abbiotek.com**

https://wine.abbiotek.com

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