FermControl
YEAST NUTRITION

The 4-in-1 solution for an optimal fermentation

FermControl is an one of a kind yeast nutrient. It's a 4-in-1 solution that fulfills all your yeasts needs during fermentation. Using ONLY FermControl will maximise the potential of your wine, providing natural fruit expression, brighter acidity and freshness, better long-term stability and no reductive off-flavours. It truly is unique.

FermControl/FermControl BIO
1kg, 5kg, 100kg

For sparkling, white, rosé & red wines

Plus cider and all kinds of fruit fermentation

- Protects and enhances varietal aromas and flavours
- Inhibits the formation of H_2S and reductive off-flavours
- Increases the formation of fruity esters
- Supports glutathione production of yeast leading to increased stability of the wine
- Facilitates an easy MLF due to lowering the SO_2 production by yeast
- Highly complex, lower purification level so ideal for highly clarified juice
- FermControl BIO is certified organic

Organic Certified

100%
vegetarian & vegan
free from known allergens

CAUTION!

Do NOT use other yeast nutrient, yeast rehydration nutrient, yeast supplement products or DAP* in conjunction with FermControl.
THEY ARE NOT NECESSARY.

FERMCONTROL IS A ONE POUCH SOLUTION developed to cover ALL requirements for ALL fermentations.

**DAP maybe required in low YAN conditions*

FermControl™ Addition Guide

FermControl™ is a one pouch solution and should not be used in conjunction with any other nutrient.

Standard Addition

Baumé	YAN (ppm)	1st Addition on day 1 with 2B yeast; or on day 2 with all other yeasts	2nd Addition ⅔ through fermentation (i.e. 4-5°Baumé)
>12.5	>130	200 ppm **FermControl™**	200 ppm **FermControl™**
<12.5	>130	150 ppm **FermControl™**	150 ppm **FermControl™**

HOT TIP
YAN MEASURMENT
For reds, take sample >6 hours after skin contact. For whites, take sample after crush.

Remedial Addition - in event of Sulphide Formation/Sluggish Fermentation

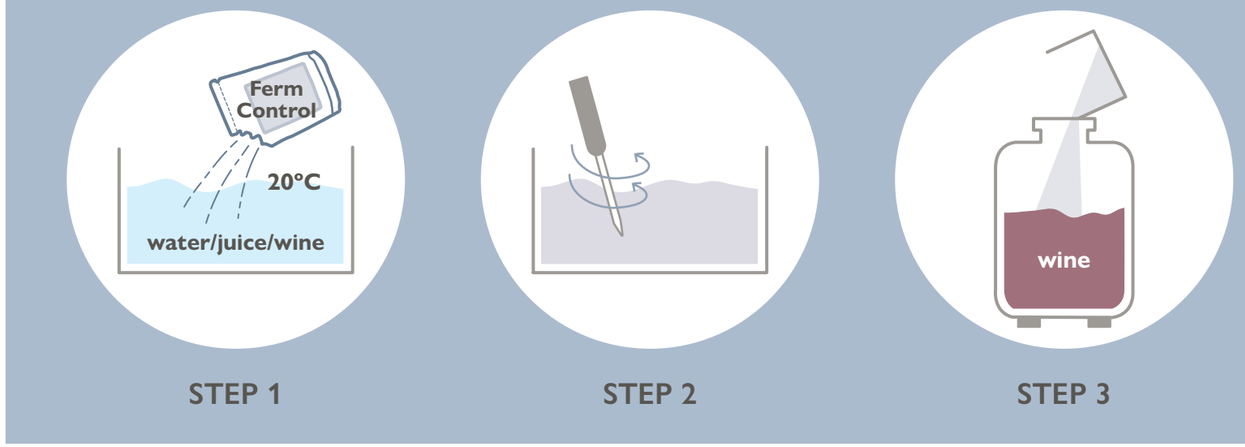
Between 1st & 2nd addition	100 ppm **FermControl™** + 150 ppm **ClearUp**
Between 2nd addition and 2°Baumé	50 ppm **FermControl™** + 150 ppm **ClearUp**
Below 2°Baumé provided the yeast are still active	25 ppm **FermControl™** + 100 ppm **ClearUp**

Secondary Fermentation

Bottle Fermentation & Méthode Charmat	150 ppm **FermControl™**

Spontaneous Fermentation

As soon as the yeast shows significant activity (CO_2 release)	200 ppm **FermControl™**
⅔ through fermentation	200 ppm **FermControl™**



For technical advice please contact Kauri - 1800 127 611 or email info@kauriwine.com

Low NTU <50 in white juices

Add at yeast inoculation	150 ppm **ClearUp**

Low YAN with Baumé <14° when using VitiFerm™ Rubino Extra & Vulcano

YAN (ppm)	1st Addition at Yeast Activation **NEW**	2nd Addition ⅓ through fermentation (i.e. 9-12°Baumé)	3rd Addition ⅔ through fermentation (i.e. 4-5°Baumé)
130 – 75	300 ppm **FermControl™** + 150 ppm **ClearUp**	200 ppm **FermControl™**	100 ppm **FermControl™**

Low YAN with Baumé <14° when using all other yeast

YAN (ppm)	1st Addition at Yeast Activation **NEW**	2nd Addition ⅓ through fermentation (i.e. 9-12°Baumé)	3rd Addition ⅔ through fermentation (i.e. 4-5°Baumé)
130 – 100	200 ppm **FermControl™** + 150 ppm **ClearUp**	200 ppm **FermControl™** + 200 ppm DAP	50 ppm **FermControl™**
100 – 75	200 ppm **FermControl™** + 150 ppm **ClearUp**	200 ppm **FermControl™** + 300 ppm DAP	50 ppm **FermControl™**
75 – 50	300 ppm **FermControl™** + 100 ppm **ClearUp**	200 ppm **FermControl™** + 400 ppm DAP	100 ppm **FermControl™** + 50 ppm DAP
50 – 25	300 ppm **FermControl™** + 100 ppm **ClearUp**	200 ppm **FermControl™** + 500 ppm DAP	100 ppm **FermControl™** + 50 ppm DAP

Low YAN with Baumé >14°

YAN (ppm)	1st Addition at Yeast Activation **NEW**	2nd Addition ⅓ through fermentation (i.e. 9-12°Baumé)	3rd Addition ⅔ through fermentation (i.e. 4-5°Baumé)
130 – 100	300 ppm **FermControl™** + 150 ppm **ClearUp**	200 ppm **FermControl™** + 300 ppm DAP	50 ppm **FermControl™**
100 – 75	300 ppm **FermControl™** + 150 ppm **ClearUp**	200 ppm **FermControl™** + 400 ppm DAP	50 ppm **FermControl™**
75 – 50	400 ppm **FermControl™** + 100 ppm **ClearUp**	300 ppm **FermControl™** + 500 ppm DAP	100 ppm **FermControl™** + 50 ppm DAP
50 – 25	400 ppm **FermControl™** + 100 ppm **ClearUp**	300 ppm **FermControl™** + 600 ppm DAP	100 ppm **FermControl™** + 100 ppm DAP

High YAN Addition

YAN (ppm)	1st Addition	2nd Addition
>250	150 ppm **FermControl™**	150 ppm **FermControl™**
>400	100 ppm **FermControl™**	100 ppm **FermControl™**

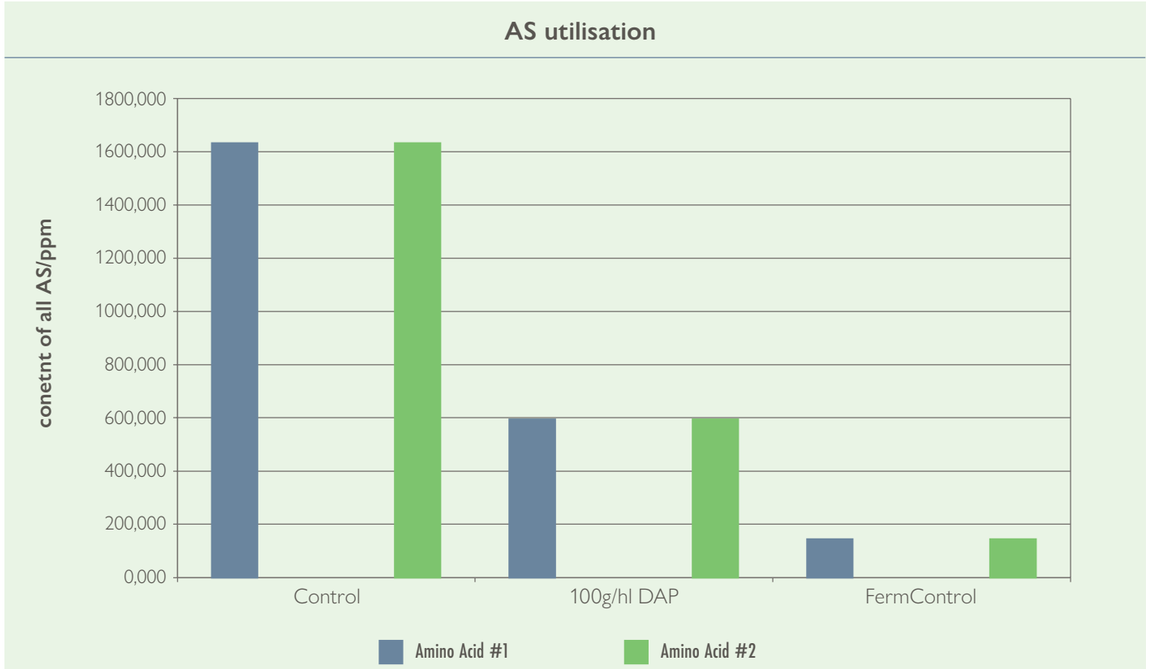
Supplementation and the Benefits for a Reliable Fermentation and Secure Aromatic Profile

General aspects on supplementation for yeasts

The nutrition of yeast during the alcoholic fermentation requires a couple of different substrates. In the past, nitrogen was regarded as the only relevant parameter to ensure a clean and complete alcoholic fermentation. The latest studies have shown that pure nitrogen is not the only factor to ensure this. Supplementations with other co-factors such as vitamins and trace elements have the same importance as pure nitrogen. The yeast supplement **FermControl** provides all these factors on a natural basis. **FermControl** enables the yeast to utilise the natural amino acids in the juice more efficiently and more completely than any other product on the market.

Graph 1. Illustrates the impact of the supplementation on the utilisation rate of natural amino acids.

The initial YAN value of the juice was 210ppm. It is evident that the fermentation supplemented with **FermControl** showed a significantly higher utilisation rate of the total amino acids, which results in a lower residual content.



Study from 2007 in German Riesling

Timing of Addition

It is extremely important that **FermControl** is added at the recommended times and at the recommended rates. Please refer to our **Addition Guide** (page 2-3) for more detail.

It is recommended to analyse the typical content of YAN in the juice, or even better to identify the typical YAN figure of a certain vineyard to build up a historical database for an accurate management of the alcoholic fermentation. In Low YAN conditions it is important to know the ratio of Free Ammonia Nitrogen (FAN) and Primary Amino Nitrogen (PAN) in the juice/must so the additions of **FermControl** and DAP (where necessary) can be correctly calculated and applied. Please contact us for technical advice in these situations.

FermControl & FermControl BIO

Special nutrition supplement for the support of the yeast metabolism

The alcoholic fermentation in wine puts all yeast through a lot of challenges. Low pH and high osmotic pressure influences the yeast's metabolism substantially. To achieve the main objectives for winemaking, the yeast requires optimal conditions to ferment reliably and give the best sensory results.

The addition of only nitrogen to fermentations is insufficient to ensure a reliable and "clean" fermentation with optimal flavours. It is essential to provide all co-factors that help regulate the yeast's metabolism. Supplements other than nitrogen ensure an efficient utilisation of the natural nitrogen sources in the juice to conduct a secure, clean and flavourful fermentation. They enable the yeast to complete fermentations in optimum condition to produce high quality wines.

Properties

FermControl provides all specific co-factors to the fermentation by adding a balanced combination of yeast nutrition compounds and co-factors that compensate for natural deficits in the grapes. All metabolic functions of the yeast will be improved. FermControl…

- stimulates an efficient utilisation of free ammonia and amino acid in all juices.
- eliminates the requirements to add DAP in most juices.
- ensures a reliable fermentation under difficult conditions, such as high alcohol or botrytis conditions.
- can be used in all kinds of juices and musts.

Better amino acid utilisation with FermControl Figure 1. compares the use of FermControl v's DAP in a fermentation. The grey bar indicates the initial amino acid content of the juice and the two coloured bars show the residual amino acids left in the wine after fermentation. It is clear that by using FermControl you achieve a more complete utilisation of amino acids.

Lower Production of Acetic Acid and SO_2 from Yeasts

Figure 2 and 3 show the effect of FermControl on the VA and SO_2 formation capacity of the yeast. The FermControl treated wines have a significantly lower level of VA and SO_2. The addition of DAP has limited effect.

Fig 1. Study on amino acid utilisation improvement

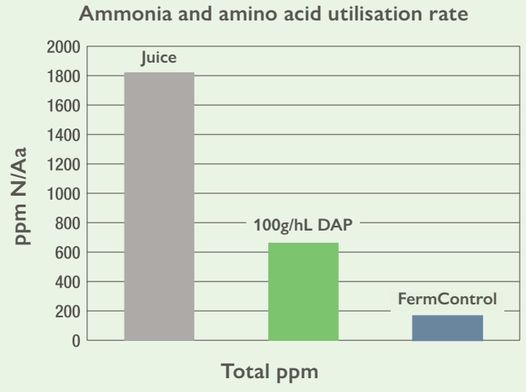
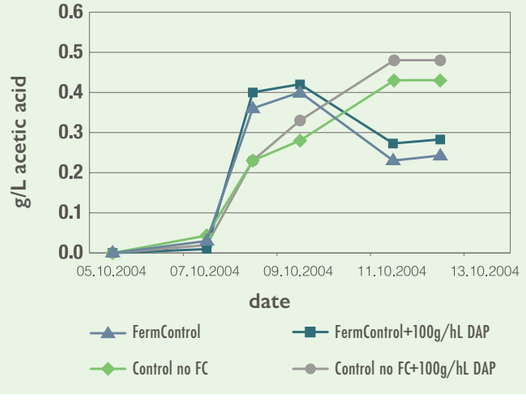


Fig 2. VA Formation



Flavour Management

FermControl improves the aromatic quality and ageing potential in all wines. The effect will become visible once the wines are sulphured and clarified. The application of FermControl in poor juices will show already an instant effect on the sensorial profile during the fermentation.

With the addition of FermControl to the alcoholic fermentation, the formation of undesired sulphur compounds of yeast will be avoided. This results in clean wines with enhanced varietal character and without reduced off-flavours.

FermControl…

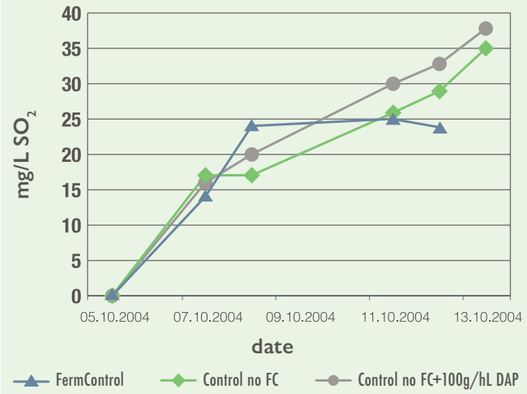
- improves the ability of the yeast to produce fruity esters.
- controls the formation of any sulphide components deriving from the fermentation.
- reduces the need for copper sulphate fining.
- stimulates the glutathione production of all yeasts.
- increases the ageing potential so wines stay fresher for longer.

Ingredients

FermControl and FermControl BIO are specially purified inactivated yeast preparations that contain a blend of naturally derived vitamins, trace elements and amino acids. The special purification process ensures a microbial integrity, DAP and GMO-free, packed under CO_2 atmosphere, and compliant with FSANZ food standards.

FermControl BIO is produced using certified organic ingredients and is compliant with the organic regulation EC 834/2007 and 889/2008.

Fig 3. SO_2 Formation



Organic Certified

100% vegetarian & vegan free from known allergens

Kauri Winemaking Innovation

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