YEAST NUTRIENTS

Understanding the nutritional requirements of yeast is fundamental in order to accomplish a successful fermentation and prevent stuck fermentations. Managing nutrient requirements not only allows for regular and complete fermentations but enhances sensory quality. Enartis has a wide range of nutrients which provide solutions for many different conditions and purposes.

enartis

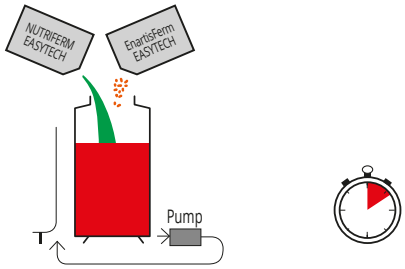
Inspiring innovation.

EASYTECH NUTRIENTS

No prior dissolution required! Easytech is a certified range of Enartis yeasts and nutrients that can be added directly to juice rather than requiring typical rehydration steps. This innovative range simplifies and minimize cellar operations, saving wineries time, labor, and money. Enartis offers two fermentation activators:

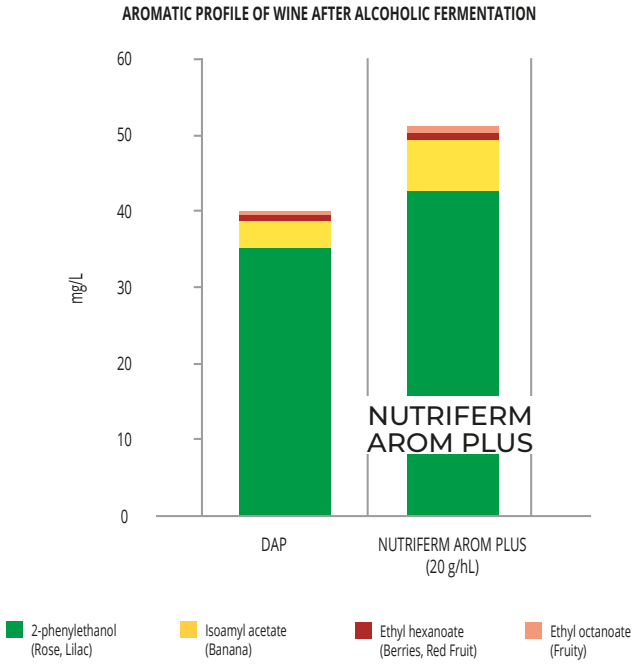
- **NUTRIFERM ULTRA**
- **NUTRIFERM AROM PLUS**

Easytech **nutrients** are micro-granulated, meaning they are less powdery and safer to use. They are also easier to dissolve directly in must without creating clumps and provide immediately available nutrients for yeasts due to the high solubility rate.



Just one step! Sprinkle Easytech yeasts and nutrients onto juice surface, wait 10-15 minutes, then homogenize with a pump-over.

Enartis Easytech range is also suitable for traditional yeast inoculations.



NUTRIFERM AROM PLUS increases the production and content of aromatic compounds in wine.

NUTRIFERM ULTRA

- Autolyzed yeast with an elevated content of easily assimilable amino acids and thiamine (vitamin B1).
- Provides all nutritional factors necessary to improve yeast viability and ensure successful fermentations without defects, flawless both in the mouth and nose.
- Granulated nutrient formulated to be added directly to juice without prior dissolving (**Easytech**).

Application: *promotes a regular and complete fermentation; enhance the varietal expressions*

Dosage: *10-30 g/hL (0.8-2.4 lb/1,000 gal)*

1 kg (Item #35-217-0001)
10 kg (Item #35-217-0010)

NUTRIFERM AROM PLUS

IMPROVE AROMATICS

- Autolyzed yeast with an elevated content of free amino acids and survival factors and thiamine (vitamin B1).
- Elevated content of selected amino acids used by yeast as precursors of aromatic compounds to strongly increase intensity, freshness and complexity.
- Provides survival factors to improve yeast viability and ensure successful fermentations.
- Granulated nutrient formulated to be added directly to juice without prior dissolving (**Easytech**).

Application: *ensure optimal yeast growth; enhance secondary aroma production*

Dosage: *15-30 g/hL (1.3-2.4 lb/1,000 gal)*

1 kg (Item #35-211-0001)
10 kg (Item #35-211-0010)

NUTRIFERM AROM PLUS is far and away the best performing complex yeast nutrition on the market! When added during rehydration of the yeast, it ensures a complete and steady fermentation, assisting yeast in fermentation to produce a complex flavor profile in any wine style. **Rianco van Rooyen, Winemaker at Robertson Winery - South Africa**

We've used Enartis nutrients almost exclusively for over a decade - at least 400 ferments. Stuck ferms, restarts, and copper fining are rarities for us. While NUTRIFERM ENERGY and ADVANCE are the backbone of our nutrient protocols, we are increasingly impressed by phenolic impact of NUTRIFERM AROM PLUS and the end-of-ferment benefits of No Stop. We rely on the consistency that the NUTRIFERM line provides for our wines and those of our clients. **Lucas Meeker, Winemaker at The Meeker Vineyard - California, USA**

NUTRIFERM ENERGY

- Autolyzed yeast with high content of free amino acids and thiamine (vitamin B1).
- Shortens lag phase, prevents formation of H_2S and acetic acid.
- Vital in initial phases of yeast multiplication.

Application: *promotes a regular and complete fermentation; enhance the varietal expressions*

Dosage: *10-30 g/hL (0.8-2.4 lb/1,000 gal)*

1 kg **(Item #35-200-0001)**
10 kg **(Item #35-200-0010)**

> *I've been using NUTRIFERM ENERGY on red wines at yeast inoculation. It's a very reliable nutrient that allows smooth and clean fermentations without challenges. NUTRIFERM ENERGY respects the aromatic profile of the fruit.* **Alberto Bianchi, Winemaker at Newton Vineyards - California, USA**

NUTRIFERM SPECIAL

- Complex nutrient containing ammonium phosphate (DAP), inactivated yeast and thiamine (vitamin B1).
- Facilitates fermentation and prevents stuck fermentations.
- Prevents production of H_2S.

Application: *musts with low YAN; nutrient correction at yeast inoculation or 1/3 sugar depletion*

Dosage: *30-50 g/hL (2.4-4.2 lb/1,000 gal)*

10 kg **(Item #35-225-0010)**

> *I am very happy with NUTRIFERM SPECIAL. We inoculated six red wine tanks just this morning together with NUTRIFERM SPECIAL. It is so easy to work with, and works with any yeast! Fermentation starts quickly when using this product. I can definitely recommend it to other winemakers.* **Hanlie Schönbom, Assistant Winemaker at Napier Winery - Wellington, South Africa**

NUTRIFERM ADVANCE

- Complex nutrient containing ammonium phosphate (DAP), inactivated yeast and cellulose.
- Prevents irregular kinetics while maintaining efficient sugar transport.
- Improves yeast alcohol tolerance, prevents H_2S formation and detoxifies must.

Application: *nutrient correction at 1/3 sugar depletion; prevention of off-flavors and stuck or sluggish fermentations*

Dosage: *20-40 g/hL (1.7-3.4 lb/1,000 gal)*

1 kg **(Item #35-215-0001)**
10 kg **(Item #35-215-0010)**

NUTRIFERM NO STOP

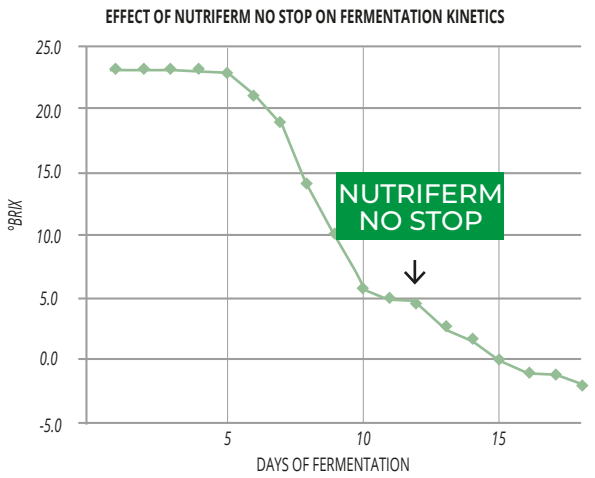
DON'T GET STUCK!

- Inactivated yeast, autolyzed yeast, thiamine hydrochloride (vitamin B1).
- Helps maintain yeast membrane integrity, prevents and corrects fermentation anomalies.

Application: *prevent and treat stuck fermentations*

Dosage: *20-40 g/hL (1.7-3.4 lb/1,000 gal)*

1 kg **(Item #35-212-0001)**
10 kg **(Item #35-212-0010)**



The addition of NUTRIFERM NO STOP helped complete fermentation. In addition to having a detoxifying effect, NUTRIFERM NO STOP provides essential elements for yeast to stay resistant, active and complete fermentation.

NUTRIFERM CONTROL

- Inactivated yeast.
- Removes toxins and promotes clean and complete fermentations.
- Reduces the risk of sulfur compound formation and assures aromatic cleanliness.

Application: *detoxifies must; helps restart the fermentation*

Dosage: *20-40 g/hL (1.7-3.4 lb/1,000 gal) during primary and sluggish/ stuck fermentation; 5-20 g/hL (0.4-1.7 lb/1,000 gal) during sparkling second fermentation*

25 kg **(Item #30-024-0020)**

ENARTIS NUTRIENTS AND FERMENTATION AIDS MAIN FEATURES

	Application	Nitrogen from Aminoacids	Inorganic nitrogen	Aromatic precursors	Sterols & fatty acids	Minerals	Vitamins	Tannins	Adsorptive effect	Timing of addition	Recommended dosage
NUTRIFERM AROM PLUS Easy tech CERTIFIED BY ENARTIS	Supply of precursors for the synthesis of fermentation aromas	♦♦♦♦♦♦		♦♦♦♦♦♦	♦♦♦	♦♦♦	♦♦♦		♦♦♦♦	Yeast inoculation	15-30 g/hL
NUTRIFERM ULTRA Easy tech CERTIFIED BY ENARTIS	Reinforce fermentation capacity of yeast	♦♦♦♦♦♦		♦♦♦♦	♦♦♦♦	♦♦♦	♦♦♦♦		♦♦♦♦	Yeast inoculation	10-30 g/hL
NUTRIFERM ENERGY	Reinforce fermentation capacity of yeast	♦♦♦♦		♦♦♦	♦♦♦♦	♦♦♦	♦♦♦♦		♦♦♦♦	Yeast inoculation	10-30 g/hL
NUTRIFERM SPECIAL	Balanced and complete nutrition	♦♦	♦♦♦	♦	♦♦	♦♦	♦♦		♦♦♦	Yeast inoculation	30-50 g/hL
NUTRIFERM ADVANCE	Help for a complete and clean fermentation		♦♦♦			♦♦♦	♦♦♦			1/3 sugar depletion	20-40 g/hL
NUTRIFERM NO STOP	Prevention and treatment of stuck fermentation			♦	♦♦♦♦♦♦	♦♦	♦♦♦		♦♦♦♦♦♦	Second half of fermentation and in case of sluggish or stuck fermentation	20-40 g/hL

KNOW MORE ABOUT YEAST NUTRITION

Appropriate, balanced nutrition is an essential factor in managing the overall health and success of fermentations. Without proper nutrition introduced at the right stage of their growth cycle, yeasts can face stress and produce undesirable characteristics. Stuck or sluggish fermentations are also hazards of poor yeast nutrition.

WHAT NITROGEN FORMS ARE NATURALLY PRESENT IN GRAPES?

Grapes provide nitrogen in the form of proteins, peptides, alpha amino acids and ammonium ions.

YEAST NEEDS FOR BALANCED NUTRITION

The quantity and quality of nitrogenous substances and other elements/compounds play an essential role in yeast metabolism, fermentation kinetics and the organoleptic profile of wine:

- Nitrogen (ammonium and amino acids) is required for yeast growth, structural protein synthesis, cell wall components, enzyme synthesis and sugar transport and aroma production.
- Vitamins have a role in cell growth, fermentation activity and nitrogen metabolism.
- Minerals impact yeast fermentative metabolism.
- Sterols and unsaturated fatty acids help yeast survive and resist stress.

WHICH OTHER FACTORS SHOULD BE CONSIDERED REGARDING YEAST NUTRITION?

- Temperature: An increase in temperature stimulates yeast growth and fermentation rate, thereby requiring increased levels of nitrogen.
- Turbidity: In whites and rosés, juice clarification eliminates some nutrients, sterols and fatty acids essential for yeast survival. If the turbidity after clarification is below 80 NTU, add 30 g/hL of NUTRIFERM NO STOP.
- Fruit affected by mold requires more amino acids and vitamins than healthy fruit.
- Yeast strains: Each yeast strain has specific nutritional requirements.

MY WINE IS AROUND 5°BRIX AND I MISSED THE 1/3 SUGAR DEPLETION NUTRIENT ADDITION, WHICH NUTRIENT CAN I ADD?

Nitrogen uptake is inhibited as soon as alcohol becomes a stress. At this point during fermentation, the addition of NUTRIFERM NO STOP will improve yeast resistance and help maintain an active sugar transport system.

WHY USE NUTRIFERM NO STOP?

- Restores cell membrane
- Increases yeast viability
- Eliminates toxins such as short-chain fatty acids
- Restores sugar consumption
- Provides physical support to keep yeast in suspension

THE IMPORTANCE OF BALANCED NUTRITION FOR YEAST HEALTH

Balanced nutrition is essential for optimal status and biomass production. Nitrogen availability, regardless of the origin (amino acids or ammonia), will affect fermentation performance as well as the production of secondary metabolites and aromatic compounds during fermentation.

- **Amino acids** are assimilated by the yeast without consuming a large amount of energy. Yeast can store them for later or use to synthesize proteins, enzymes and other amino acids.
- **Ammonia** requires a large amount of time and energy (long transformation process) to synthetize proteins and enzymes.

ENARTIS NUTRIENTS RECOMMENDATION FOR A BALANCED NUTRITION

NUTRIFERM AROM PLUS	Rich in aromatic amino acids precursors to promote the synthesis of esters.
NUTRIFERM ULTRA	Rich in essential amino acids to ensure optimal yeast growth.
NUTRIFERM ADVANCE	Maintains the vital activity of yeast until complete sugar depletion and detoxifies the juice.
NUTRIFERM NO STOP	Rich in survival factors that regenerate the cell membrane. Detoxifies the juice. Prevent or treat sluggish and/or stuck fermentations.