Erbslöh Vinification

OUR PRODUCTS FOR YOUR PROGRESS
INNOVATIVE IDEAS GROW BEST ON TRADITIONAL SOIL

Erbslöh Geisenheim AG has its origin in a family business, existing for more than 100 years. It is a globally operating specialist for the treatment of beverages and a leader in research and development, consulting and service. Our customers directly benefit from our competence, which steadily grows through our intensive collaboration with research institutes for beverage technology. Besides innovative solutions in product optimization and product refinement, Erbslöh Geisenheim AG offers a broad range of products, which are relevant to the winemaking process. We think and live in a future-oriented manner, nationally and internationally!
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Aktivit
Calcium-sodium bentonite granulate.

**Aim of treatment**
Stabilization against protein and colloidal cloudiness. Clarification.

**Product and effect**
Aktivit is a granulated pure bentonite with a large surface area for beverage treatment. Aktivit provides protein stabilization and clarification in those cases where a pure calcium bentonite is not sufficient. Aktivit adsorbs proteins, polyphenols and other undesired substances, even in beverages with a relatively high pH-value or low acidity.

**Dosage**
70-150 g/100 L

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FermoBent PORE-TEC
Juice bentonite for time-saving co-fermentation. Lowest in heavy metal content and settling volume.

**Aim of treatment**
FermoBent PORE-TEC provides an early and lasting protein stabilization during alcoholic fermentation. Additionally fermentation-inhibiting substances are removed. Due to it’s extremely low iron solubility, FermoBent PORE-TEC can remain in the fermenting medium, which enables an improved CO₂ release during fermentation. Finally it will be racked off together with the gross lees.

**Product and effect**
- Specific porous structure
  - More intensive and selective adsorption of proteins and inhibiting substances
  - Direct dosage possible
- Targeted mineral selection
  - Even more gentle to the beverage, more careful treatment
  - Decisive for a clean wine aroma
  - Quick reacting
  - Highest purity, extremely low in iron

**Dosage**
100-200 g/100 L grape juice

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Blancobent UF
Bentonite powder for ultrafiltration.

**Aim of treatment**
- Stabilization against proteinaceous and colloidal cloudiness in beverages
- Filtration and stabilization in one process step
- Reduced bentonite dosage in comparison to conventional bentonites

**Product and effect**
Due to it’s specific granulometry (absence of particles > 100 μm) this bentonite does not cause any abrasive wear to crossflow membranes. Owing to the defined particle-size distribution, it is suitable for a direct dosing into hollow fiber membranes. In this way, clarification and stabilization need only one process step and a reduced dosage.

**Dosage**
20-200 g/100 L (wine)
35-75 g/100 L (fruit juice)

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GranuBent PORE-TEC
Pure sodium bentonite, granulated.

**Aim of treatment**
For rapid and efficient protein stabilization, leading to excellent clarification of wine, vinegar and fruit juices.

**Product and effect**
GranuBent PORE-TEC is a top-quality sodium bentonite with high swelling capacity and special purity. Good clarification and high protein adsorbing properties turn GranuBent PORE-TEC into an effective but gentle wine treatment. Lowest settling volume for pure sodium bentonites.

**Dosage**
20-100 g/100 L (wine)
35-75 g/100 L (juice)
40-150 g/100 L (vinegar)
**BENTONITES**

**NaCalit PORE-TEC**

Na-Ca bentonite, granulated.

**Aim of treatment**
Excellent flocculation, adsorption and clarification. Very efficient in problematic cases.

**Product and effect**
- PORE-TEC granulation
  - Easily wettable and suspendable
  - Intense and selective adsorption of proteins and colloids
  - Strong clarifying effect, also functions well when pH-values are high

**Precise mineral selection**
- Discernible by its light color
- Even milder, more careful beverage treatment
- Low volume of sediment
- Color preserving

**Dosage**
50-150 g/100 L

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**Seporit PORE-TEC**

Bentonite for juice treatment, granulated.

**Aim of treatment**
Clean fermentation and careful protein stabilization in the juice. Early removal of fermentation inhibiting juice components.

**Product and effect**
By PORE-TECnology granulation the following advantages are achieved:
- Specific porous surface structure
  - Intense and selective adsorption of proteins
  - Easily wettable and suspensible

**Precise mineral selection**
- Mild and careful beverage treatment
- Efficient clearing of the juice
- Decisive for clean wine aroma
- High reactivity
- Short settling time
- High purity, low in iron solubility

**Dosage**
100-200 g/100 L juice

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**ACTIVATED CARBON**

**Granucol GE / Granucol FA**

Selectively reacting activated carbon pellets.

**Aim of treatment**
Depending on the situation, the individual Granucol types are applied as follows:
- Granucol GE: for the adsorption of undesired off-flavors
- Granucol FA: for the elimination of brownish color pigments

**Product and effect**
The application of Granucol results in a selective adsorption of undesired off-flavors and color pigments. The carbon pellets undergo a special production process and are easy to dissolve once added to the beverage. Granucol sediments quickly and well in the tank.

**Dosage**
10-40 g/100 L
**ErbiGel Flot**

Gelatin for flotation in grape juices.

**Aim of treatment**
ErbiGel Flot is a special gelatin with high capacity for flocculation and binding of phenols during flotation.

**Product and effect**
ErbiGel Flot is an easily soluble, ground gelatin. The acidic character and the high Bloom value provide a quick binding of phenols and thus an immediate flocculation effect. ErbiGel Flot is highly efficient even if the juice contains increased phenol contents or glucans from Botrytis.

**Dosage**
5-15 g/100 L

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**IsingClair-Hausenpaste**

Isinglass gel.

**Aim of treatment**
IsingClair-Hausenpaste enables a particularly gentle fining. It is extremely efficient with regard to all beverages with a high content of colloidal turbidity such as wines from heated must, wines from pasteurized juices and wines especially rich in extracts (e.g. botrytized wines).

**Product and effect**
IsingClair-Hausenpaste leads to a quick flocculation of the sediment particles after it has been evenly distributed in the beverage. Due to the compactness of the precipitated sediment, it can be easily removed. IsingClair-Hausenpaste is insensitive to low wine temperatures and gives red wines a brilliant color.

**Dosage**
25-75 mL/100 L - for medium turbidity
100 mL/100 L - for higher colloidal haze

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**Erbslöh Mostgelatine CF**

Liquid gelatin in juice.

**Aim of treatment**
The objective of Erbslöh Mostgelatine CF is the reduction of unbalanced polyphenols and catechins in juice. An early removal of these substances avoids the treatment in the wine and improves the aromatic aging potential.

**Product and effect**
Erbslöh Mostgelatine CF is a casein-free juice gelatin. The composition consists of liquid gelatin, combined with isinglass and PVPP. It reduces a broad spectrum of undesirable bitter substances without eliminating beneficial ingredients of the juice, even at low temperatures.

**Dosage**
50-300 mL/100 kg

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**FloraClair** (Approval pending in the USA)

Pure plant protein.

**Aim of treatment**
FloraClair is a purified plant-based protein for the treatment of grape juice and wine. It is the perfect alternative to animal-derived products when it comes to flotation, clarification and polyphenol management.

**Product and effect**
- Flocculation of grape juice
- Clarification and stabilization of juice and wine
- Reduction of tannins and oxidized brownish color pigments.

**Dosage**
10-30 g/100 L

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**Klar-Sol Super**

Silica gel.

**Aim of treatment**
Efficient clarification of wine, juice and other beverages by applying Klar-Sol Super in combination with a protein treatment of the beverages.

**Product and effect**
Klar-Sol Super reacts in combination with protein containing agents. The nature of the primary particles provides for a surface structure with extremely high charge intensity, which is a big advantage for wines and juices with increased pH-value as well as increased content of fungal substances. Being acidic silica gel, Klar-Sol Super has the special advantage to flocculate very quickly and to provide a compact deposit of lees.

**Dosage**
20-30 mL/100 L

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**LiquiGel Flot**

Liquid gelatin.

**Aim of treatment**
LiquiGel Flot supports quick flocculation and the binding of phenols during flotation.

**Product and effect**
LiquiGel Flot is a liquid composition of gelatins of different structure and molecular size. The large reactive surface provides a quick binding of phenols and thus an immediately perceptible flocculation during flotation. It can be used in combination with Granuclal GE in case of Botrytis infected grapes.

**Dosage**
50-100 mL/100 L
### Trenolin FastFlow DF

**Packaging 1 kg**

**Liquid multi-pectinase formulation.**

**Aim of treatment**

Targeted breakdown of the branch points for more effective pectin hydrolysis in grape juice. As a consequence, pectin loses the water-binding capacity and viscosity is reduced. Application at low temperatures possible. Increased filtration rates in white and red wines.

**Product and effect**

Grape pectin is particularly rich in arabinogalactan-II-side chains. This is the reason why, compared to other fruit pectins, grape pectin is more difficult to break down and a larger portion of branched pectin residues remain in the must, juice and wine. Especially obvious is this effect with grape varieties rich in pectins. Trenolin FastFlow DF is capable of degrading this fraction.

**Dosage**

3-10 mL/100 L or kg

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### Trenolin Frio DF

**Packaging 1 / 10 kg**

**Liquid cold temperature acting pectinase.**

**Aim of treatment**

- Rapid, effective pectin hydrolysis in white and red must in the course of cold maceration processes to 41 °F resulting in improved press performance.
- Promotion of aroma precursor release during cold maceration of white and red grape must.
- Improvement of juice fining.
- Innovative pectinase Trenolin Frio DF performs effective pectin degradation at temperatures of 41 °F. In the must dissolved pectins with high water-binding capacity are hydrolyzed leading to improved juice run-off at low pressing pressures.

**Product and effect**

- Trenolin Frio DF application is highly economic due to its excellent performance at relatively short contact times and also at very low temperatures.
- Innovative pectinase Trenolin Frio DF performs effective pectin degradation at temperatures of 41 °F. In the must dissolved pectins with high water-binding capacity are hydrolyzed leading to improved juice run-off at low pressing pressures.

**Dosage**

2-10 mL/100 L or kg

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### Trenolin Color DF

**Packaging 0.1 / 1 kg**

**Granulated pectinase.**

**Aim of treatment**

Trenolin Color DF achieves extraction and stabilizing effects for the vinification of dark red and full bodied wines. In all red wine making processes, Trenolin Color DF increases the color intensity and stabilization. Yields increase up to 5-8 %.

**Product and effect**

Beside the release of red wine pigments Trenolin Color DF is stabilizes soft tannins. This gives the finished wine a full bodied structure without an excessive release of colloids.

**Dosage**

1-4 g/100 L or kg

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### Trenolin Flot DF

**Packaging 1 kg**

**Liquid flotation enzyme.**

**Aim of treatment**

- Rapid pectin hydrolysis
- High degree of clarification
- Quick lowering of viscosity
- Time-saving

**Product and effect**

The composition of Trenolin Flot DF is focused on the esterase activity which ensures quick pectin degradation into single entities ready to flocculate. Trenolin Flot DF proves efficient in the pH-range of white juices and grape juices. Trenolin Flot DF is a purified enzyme preparation without oxidase side activities.

**Dosage**

2-8 g/100 L or kg

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### Trenolin Bukett DF

**Packaging 1 kg**

**Liquid, pectolytic enzyme with aroma releasing effect.**

**Aim of treatment**

Liberation of aroma precursors and terpenes. The typical bouquet of the vine variety becomes more pronounced.

**Product and effect**

The varietal character of a wine is determined by the aromatic profile of the grape and the fermentation aromas, formed by the wine yeast from precursors. Aroma substances which are bound to glycosides can be released by Trenolin Bukett DF.

**Dosage**

10 mL/100 L or kg
**Trenolin Rouge DF**

**Packaging** 1 kg

**Fine granulate pectinase.**

**Aim of treatment**
- Vinification of full bodied red wines with a balanced tannin structure. The resulting red wines are compact, stable and with intense color. The color yield in the course of fermentation on skins as well as during a thermal juice treatment is optimized by Trenolin Rouge DF. Yield increase by the enzyme application comes up to 5-8 %.

**Product and effect**
- Enhances the release of coloring matter during must extraction. At the same time, it extracts tannins which give the finished wine its typical full bodied character.

**Dosage**
3-10 mL/100 L or kg

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**Trenolin Opti DF**

**Packaging** 0.1 / 1 kg

**Fine granulate pectinase.**

**Aim of treatment**
- Better pressability, shorter pressing times, increased press capacity
- Increased free-run juice, reduced extraction of tannins and of bitter substances due to lower pressing pressures

**Young wine:**
- Better clarifying effect in young wine and increased filter performance

**Product and effect**
By its well-balanced composition of enzyme activities, Trenolin Opti DF ensures a rapid and complete pectin degradation. Trenolin Opti DF is a purified enzyme preparation which is therefore free from depectinase and oxidase side activities. This preserves the freshness of the natural fruitiness.

**Dosage**
1-3 g/100 L or kg

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**Trenolin Super DF**

**Packaging** 1 kg

**Liquid pectinase.**

**Aim of treatment**
- Increase of free run juice
- Rapid and compact settling of lees
- Improvement of filtration

**Product and effect**
A treatment with Trenolin Super DF provides for a quick pectin degradation. Pressing time is reduced and press capacity increased. In the juice, a quick and compact sedimentation of lees is achieved. Subsequent filtration steps are improved. Due to a purification process, undesired side activities are eliminated, freshness and varietal character of the grape are preserved.

**Dosage**
3-10 mL/100 L

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**Trenolin T-Stab DF**

**Packaging** 1 kg

**Thermostable pectolytic enzyme.**

**Aim of treatment**
- Accelerated maceration of red must for improved extraction of pigments and soft tannins.
- Allows continuous operations, time and energy saving.
- Reduced microbiological risk due to reduced contact times, minimization of browning reactions by inactivation of laccase and polyphenol oxidase.
- Improved pumpability, better pressability, improved passage of the must through the heater

**Product and effect**
Anthocyanins are usually extracted relatively quick during the heating process of the thermovinification. Catechins, which are necessary for the stabilization of the anthocyanins, usually need a longer time of heat contact. The same applies to the desired tannins. The application of Trenolin T-Stab DF leads to an accelerated extraction, which allows standard process times of 2-3 hours.

**Dosage**
2-5 mL/100 L or kg
SPARKLING WINE / REMOVAL OF SULFIDE OFF-FLAVORS
**Erbslöh CompactLees**  
Packaging 1 / 10 kg

Riddling adjuvant.

**Aim of treatment**

Erbslöh CompactLees is a silicate suspension for the traditional bottle fermentation of sparkling wine. The treatment aim is to optimize the riddling process by rapid and complete settling of the yeast.

**Product and effect**

The silicates contained in the product lead to a quick agglomeration of the lees. Secure dosing is assured by using a homogeneous suspension. The accelerated sedimentation of the lees prevents the yeast from sticking to the bottle walls and it is possible to conduct several riddling steps per day.

**Dosage**

50-70 mL/100 L

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**Ercofid** (Approval pending in the USA)

Packaging 1 kg

Silver chloride preparation.

**Aim of treatment**

Removal of all kinds of sulfide off-flavors or similarly unpleasant odors in wine caused by sulfurous components, as for instance, hydrogen sulfide (H₂S), disulfides, mercaptans or thioacetates. Particularly with the treatment of persistent sulfide off-flavors Ercofid has proved to be highly efficient.

**Product and effect**

Ercofid is a silver chloride applied on an inert carrier which allows a good distribution in wine with a short reaction time. Due to the high selectivity, modifications of the wine aroma are largely excluded. Independent of the pH value, silver chloride has a very low solubility.

**Dosage**

20-50 g/100 L

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**Kupzit** (Approval pending in the USA)

Packaging 1 / 10 kg

Copper citrate.

**Aim of treatment**

Kupzit reacts quickly and specifically with sulfurous, unpleasant smelling compounds such as hydrogen sulfide and mercaptans. Once added to the wine, these compounds precipitate as black copper sulfide and do not increase the copper content of the beverage.

**Product and effect**

Kupzit contains 2 % copper citrate. For easy dosage and handling, it is coated onto a mineral carrier – a particularly pure, granulated and high-quality bentonite.

**Dosage**

5-20 g/100 L
**Degustin**

Fining agent based on silicate materials.

**Aim of treatment**
Degustin is applied for the general correction and gentle reduction of tannins in young wine. It is also shown that wines treated with Degustin are less sensitive to oxidation.

**Product and effect**
Degustin acts as selective adsorbent towards tannins and slight deviations in the aroma, revealing freshness and fruitiness. Degustin leads to an improvement of shelf life by reducing oxidizable compounds.

**Dosage**
5-20 g/100 L

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**Gerbinol Super**

Combination fining agent.

**Aim of treatment**
Specific compound for the efficient correction of unpleasant odors and tastes (such as high polyphenol contents, bitter substances, deviations from secondary fermentation etc.).

**Product and effect**
Gerbinol Super floculates immediately after addition in the wine. The voluminous flakes juice be distributed evenly by intensive stirring. The resulting fine flakes have adsorptive properties and show astonishingly successful results even when contact times are short. They can be easily separated by filtration or separation.

**Dosage**
5-10 g/100 L

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**HydroGum**

Gum arabic liquid.

**Aim of treatment**
HydroGum acts as a protector against copper haze and light iron haze. Furthermore HydroGum has a stabilizing effect on crystal precipitations and color. A positive side effect of HydroGum addition is an enhanced mouthfeel of the wines.

**Product and effect**
Gum arabic (E 414) is a natural product, which is extracted from the dried sap of acacia Senegal. It consists of L-arabinose, D-galactose, L-rhamnose and D-glucuronic acid in the ratio of 3:3:1:1. HydroGum is made from high quality gum arabic by a special production process. Due to the liquid form HydroGum can be applied very easily.

**Dosage**
40-100 mL/100 L

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**Vinpur Special**

Milk casein compound.

**Aim of treatment**
Vinpur Special eliminates polyphenols in a very gentle way.

**Product and effect**
Vinpur Special does not require additional filter aids. After settling, excellent filterability results. Vinpur Special provides for a high degree of hygienic safety, because it can be added directly to the wine without preparing a slurry first.

**Dosage**
50-60 g/100 L
**MetaGum**

**Packaging 1 / 10 kg**

Highly esterified metatartaric acid and gum arabic.

**Aim of treatment**

Prevention of crystal precipitations as, for instance, tartar deposits (potassium hydrogen tartrate) in wine. Increased crystal stability, even at higher storage temperatures. Improved organoleptic properties and with regard to red and rosé wines, increased color stability.

**Product and effect**

Substances of high molecular weight (a highly esterified metatartaric acid and a clearly soluble gum Arabic) prevent the formation of tartrate crystals in wines. The stabilizing effect is extended in comparison to only metatartaric acid. Precise statements about stability periods are however limited, due to the varying wine compositions and storage conditions.

**Dosage**

10 g/100 L

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**VinoStab**

**Packaging 5 / 25 kg**

Carboxymethylcellulose.

**Aim of treatment**

Wine treatment with VinoStab prevents precipitation of potassium hydrogen tartrate.

**Product and effect**

The product prevents the submicroscopic germs of the tartrate crystals from growing. The stabilizing effect of VinoStab depends on the oversaturation of the wines to treat. A precise evaluation of stability in respect of tartar precipitations is possible by determination of the saturation temperature or through the minicontact process (Erbslöh EasyKristaTest).

**Dosage**

75-130 mL/100 L

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**VinProtect**

**Packaging 1 / 10 kg**

Special product to protect against oxidation, undesirable microorganisms and for the preservation of the aroma potential.

**Aim of treatment**

In the must, in juice and later in wine, VinProtect effectively protects from undesirable microorganisms and oxidation. Valuable aroma components are preserved.

**Product and effect**

The antioxidant effect is high due to its carefully selected composition. Through the application of VinProtect the juice is provided with an overall protection and SO₂ dosage can be reduced before alcoholic fermentation.

**Dosage**

10-20 g/100 L
YEASTS
Erboferm™ Bio - Selection Klingelberg  
Certified, organic dry selected yeast for wine and sparkling wine from organic viticulture.

Aim of treatment
Powerful yeast (Saccharomyces cerevisiae var. bayanus) for wines and sparkling wines from organic vineyards, emphasizing the distinct character of the grape variety and terroir.

Product and effect
Making wines from organically grown grapes requires extra care, not only in the vineyard but also in overall enology. Preserving natural fruit aromas, but in the same time assuring complete fermentation is one of the characteristics of ErboFerm™ Bio - Selection Klingelberg. Alcohol tolerance is up to 16.5 % by vol. Certified organic by Lacon GmbH (DE-ÖKO-003). In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

Dosage
20-30 g/100 L (wine)

Erboferm™ Be-Red  
Organic dry selected yeast for intensively colored, structured red wines.

Aim of treatment
ErboFerm™ Be-Red is particularly suitable for red wines fermented on skins, that mature in wooden casks and have excellent complexity and full-bodied features.

Product and effect
ErboFerm™ Be-Red supports maceration activity on the must. The recommended temperature for an optimum course of fermentation and optimal sensory profile ranges between 22 and 32 °C. Alcohol tolerance is up to 15.5 % by vol. ErboFerm™ Be-Red favors malolactic fermentation. Certified organic by Lacon GmbH (DE-ÖKO-003). In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

Dosage
20-30 g/100 L

Erboferm™ Bouquet  
Organic dry selected yeast for the development of animating, fresh fruit aromas.

Aim of treatment
ErboFerm™ Bouquet produces high amounts of esters and contributes to a great variation of aromas. Advantageous for this formation is a steady and regular fermentation.

Product and effect
Exotic fruit components, cassis and sweet flower fragrances combined with a dense structure are typical for wines fermented with ErboFerm™ Bouquet. Recommended fermentation temperatures for best fermentation and sensory profile: 16-20 °C. Alcohol tolerance: 15 % by vol. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

Dosage
25-35 g/100 L

Erboferm™ Color  
Red wine yeast for intense red wine with fruity character.

Aim of treatment
ErboFerm™ Color is especially suitable for the production of intense red wines with an aroma profile of dark fruits and with aging potential.

Product and effect
Due to the nature of this yeast, deep colored wines are obtained. ErboFerm™ Color gives the perfect balance between fruit and tannin to age the wine in oak barrels. Favorable fermentation temperatures are: 18-28 °C. Alcohol tolerance: 15 % by vol. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

Dosage
20-30 g/100 L

Erboferm™ Müller-Thurgau  
Selected yeast for modern and elegant Müller-Thurgau wines with fine muscat notes.

Aim of treatment
Yeast selection for a modern style, elegant and fresh wine with spicy muscat flavours.

Product and effect
ErboFerm™ Müller-Thurgau has a calm but reliable fermentation behavior, producing harmonious, balanced Müller-Thurgau wines. The yeast needs a good nutrient supply in order to express the full aroma potential at a temperature of 18-20 °C. Alcohol tolerance: 13.5 % by vol. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

Dosage
20-40 g/100 L
**Erboferm™ PinoType**

Yeast for modern Pinot wines with a typical and creamy structure.

**Aim of treatment**
Erboferm™ PinoType is particularly recommended for Pinot Blanc, Pinot Gris, Chardonnay and Pinot Noir wines.

**Product and effect**
Erboferm™ PinoType was specially selected for fermentation of all Pinot varieties. The yeast is able to form increased amounts of fruit esters and glycerol. Erboferm™ PinoType is very suitable for sur lies aging and offers good preconditions for a successful malolactic fermentation. Favorable fermentation temperatures for whites: 18-22 °C and for reds: 20-28 °C. Alcohol tolerance: 15 % by vol. In order to achieve the optimal fermentation results, the use of VitaFerm F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**Erboferm™ Rouge**

High quality yeast for the aromatic, fruity type of red wine. Promotes red berry aromas.

**Aim of treatment**
Erboferm™ Rouge was selected for promoting red berry, cassis and cherry aromas. The yeast is very suitable for red wine types with pronounced fruit character.

**Product and effect**
Erboferm™ Rouge is also characterized by a reduced ß-glucosidase activity, resulting in a preservation of color pigments. Favorable fermentation temperatures for the course of fermentation and for sensory evaluation: 18-28 °C. Alcohol tolerance: 14.5 % by vol. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**Erboferm™ Structure**

Strong yeast supporting structure and tannic impact for red wines.

**Aim of treatment**
Erboferm™ Structure is especially suitable for making full-bodied red wines with a pronounced, but balanced tannin structure.

**Product and effect**
Tannins positively affect the structure of the red wine and emphasize the typical berry and nut aromas. Malolactic fermentation can be easily performed. Favorable fermentation temperatures are: 18-28 °C. Alcohol tolerance: 15 % by vol. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**Erboferm™ X-thiol**

Alcohol-tolerant hybrid yeast to intensify fruity thick and exotic aromas.

**Aim of treatment**
Powerful yeast for thiol-driven white wines, such as Sauvignon blanc.

**Product and effect**
Erboferm™ X-thiol is a non-GMO hybrid yeast of our own selection. The most important features are:
- high fermentation power and alcohol-tolerance
- formation of complex fermentation aromas (red grapefruit and black currant)
- intensified production of aromas of tropical fruit (passion fruit)

In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**Erboferm™ wild & pure**

“Sauvage”-style with complex aroma profile and (for wild yeast) unique fermentation potential.

**Aim of treatment**
Fermentation with a non-Saccharomyces yeast strain, promoting complex monoterpene and fruit ester formation combined with a voluminous mouthfeel.

**Product and effect**
Erboferm™ wild & pure has a (for a wild yeast) unique fermentation potential: rapid fermentation onset and a continuous fermentation until 12.0 % by vol. without inoculation of another selected yeast. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-40 g/100 L
YEAST NUTRIENTS
**VitaDrive F3**

Nutrient for yeast rehydration.

**Aim of treatment**
Mobilization of dry selected wine yeast leading to a quick fermentation onset and clean aroma profile.

**Product and effect**
VitaDrive F3 has a mobilizing effect on yeast when applied during rehydration. The resistance towards stress factors, such as permanent alcohol increase, low temperatures, yeast toxins and pesticide residues is significantly strengthened and the end of fermentation is secured.

**Dosage**
Per 1 kg of dry yeast, add 1 kg of VitaDrive F3 to the rehydration feedstock.

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**VitaFerm Bio**

Certified organic yeast nutrient.

**Aim of treatment**
VitaFerm Bio is ideal to support alcoholic fermentations with the following advantages:
- balanced nutrition supply until end of fermentation
- quick fermentation onset
- sensory evaluation is improved

**Product and effect**
VitaFerm Bio has a mobilizing effect on yeast activity preventing the production of off-flavors. VitaFerm Bio does not contain ammonium salts. Fermentation is promoted in a sustainable way, temperature peaks after nutrient addition are avoided. The fermenting yeast takes advantage of a higher resistance towards stress factors. Certified organic by Lacon GmbH (DE-ÖKO-003).

**Dosage**
30-40 g/100 L

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**VitaFerm Ultra F3**

Multinutrient complex.

**Aim of treatment**
Rapid fermentation onset, secure completion of fermentation, clean wine flavors.

**Product and effect**
The most powerful nutrient with multiple advantages for the fermentation under difficult conditions. VitaFerm Ultra F3 promotes yeast growth very efficiently, activates their enzyme activity by a balanced mineral supply and improves the metabolic activity. A vital yeast results in an attractive aroma profile and reduced SO2 demand.

**Dosage**
2 x 30-40 g/100 L
<table>
<thead>
<tr>
<th>Tannins</th>
<th>Packaging</th>
<th>Description</th>
<th>Aim of Treatment</th>
<th>Product and Effect</th>
<th>Dosage</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tannivin EH</strong></td>
<td>1 kg</td>
<td>Enological tannin from french oak wood.</td>
<td>The addition of Tannivin EH helps to protect wines from oxidation, reduces reductive notes and complements wine aging in used barrels.</td>
<td>For the production of Tannivin EH only selected air-dried oak wood of French origin is used. Tannins are traditionally applied to optimize the fining potential of the wines and to improve the structure.</td>
<td>2-20 g/100 L (red wine) 1-10 g/100 L (white wine)</td>
<td>0.5 / 25 kg</td>
</tr>
<tr>
<td><strong>Tannivin Galléol</strong></td>
<td>0.5 kg</td>
<td>Pure gallnut tannin.</td>
<td>Added to the grape must, Tannivin Galléol reduces the activity of oxidizing enzymes (laccase, tyrosinase) as a complement to SO₂. Additionally it improves the clarification process of fruit juice and wine.</td>
<td>Tannivin Galléol is a specially selected and purified gallnut tannin. By its high charge it is destined to improve clarification and stabilization of fruit juices and fruit wines, particularly in combination with FloraClair pea protein.</td>
<td>1-20 g/100 L (wine) 2-8 g/100 L (fruit juice)</td>
<td>0.1 kg</td>
</tr>
<tr>
<td><strong>Tannivin Multi</strong></td>
<td>0.1 kg</td>
<td>Tannin for must, juice and wine.</td>
<td>Tannivin Multi is applied in an early stage on crushed grapes as well as on wine. Stabilization and improvement of clarification are the main applications.</td>
<td>Tannivin Multi is a combination of a classical tannin and a quebracha tannin. Thus it combines the advantages of both. Tannin Multi plays an active role in complex formation. Stable color complexes are formed by polycondensation and polymerization.</td>
<td>10-20 g/100 L (red wine must) 2-10 g/100 L (white wine juice) 2-20 g/100 L (red wine) 1-10 g/100 L (white wine)</td>
<td>0.1 kg</td>
</tr>
<tr>
<td><strong>Tannivin Grape</strong></td>
<td>0.1 kg</td>
<td>Grape tannin from ripe French grapes.</td>
<td>Tannins are traditionally used for wine finings. Tannivin Grape brings broad protection against oxidation.</td>
<td>Tannivin Grape compensates for a lack of grape derived tannins. Additionally red color is stabilized by forming tannin-anthocyanin complexes.</td>
<td>1-15 g/100 L (red wine) 1-10 g/100 L (white wine)</td>
<td>0.1 kg</td>
</tr>
<tr>
<td><strong>Tannivin Superb</strong></td>
<td>0.1 kg</td>
<td>Oak wood tannin without tannic, astringent substances.</td>
<td>After the addition of Tannivin Superb, the wines present themselves with considerably enhanced structure, rich in finesse and strengthened in body and color. The wines are balanced with good body and acidity. The sensory sensation on the palate is intensified and supported.</td>
<td>Tannivin Superb is a high class enological tannin made of oak wood purified in a special process. This unique technology eliminates all tannic and astringent substances. Tannin Superb is a fine red-brown powder with a good solubility.</td>
<td>1-20 g/100 L (red wine) 1-5 g/100 L (white wine)</td>
<td>0.1 kg</td>
</tr>
</tbody>
</table>
**BentoTEST**

Rapid determination of the bentonite amount needed for wine and juice.

**Performance of the BentoTEST**
The question of whether the wine needs a bentonite treatment or not can be answered quickly by a pre-test with BentoTest.

**Instructions:**
1. Add 1 part BentoTEST-Reagenz to 10 parts of filtered wine (room temperature). Wines that need a bentonite treatment become turbid. The visual intensity of the turbidity already gives an idea of the amount of bentonite needed. Color changes without increased turbidity don’t have any importance.
2. Exact determination by a fining essay.
   - In order to determine the exact dosage, a fining trial and a photometric measurement are necessary.
   - 1. Preparation of several 100 mL flasks with protein unstable wine.
   - 2. Shake the bentonite solution well before application (10 % suspension, 12 h pre-swelling).
   - 3. Add the bentonite solution to the wine samples (1 mL equals 100 g/100 L when using a suspension of 10 %).
   - 4. Close the flask and shake well for 2-3 minutes.
   - 5. Filtration.
   - 6. Add 1 part BentoTEST-Reagent to 10 parts of filtered wine (room temperature).

**Result**
The sample with the lowest dosage and a turbidity < 5 NTU is the optimum treatment for protein stabilization.

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**Erbslöh EasyKrista Test**

Application kit with conductometer for the evaluation of crystal stability in wine according to Gernot Friedrich.

**Field of application**
The crystal stability of a wine is affected by different factors. Analytical values (potassium, tartaric acid, alcohol content, pH-value) and storage conditions (temperature, time, motion) have an impact. Furthermore, extract and colloid content derived from the grape, from the yeast, or through addition of high-molecular substances juice be taken into account.

**Which parameters are determined?**
The Erbslöh EasyKristaTest offers the possibility to determine the potassium hydrogen tartrate saturation temperature and the calcium tartrate saturation temperature of a wine. In addition, the tendency of a wine to form precipitations can be assessed by means of the minicontact process.
La Littorale Vinification

OUR FRENCH KNOWLEDGE FOR YOUR PROGRESS
VINIFICATION AUTHENTIQUE BY LA LITTORALE

Founded in 1896 in Béziers, the heart of the Languedoc wine region, La Littorale has been part of the Erbslöh Group since 2003. The products of the La Littorale brand connect French viticulture’s centuries of tradition and experience with modern state-of-the-art beverage technology. Vinification Authentique from La Littorale offers biotechnological and vegetable-mineral enological products for individualized French-style vinification of authentically structured wines with varietal and regional characteristics.

Experience the world of La Littorale!
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**LittoLevure Cabernet**

**Packaging 0.5 kg**

Enological yeast for a safe and structure-promoting fermentation of Cabernet wines.

**Aim of treatment**
LittoLevure Cabernet is recommended for the fermentation of Cabernet wines, expressing typical aromas of cassis, cacao and tobacco, providing an excellent complement to smoky flavors from aging in barrels.

**Product and effect**
This yeast favors the entire tannin structure providing a solid and characteristic profile of Cabernet. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**LittoLevure Chardonnay**

**Packaging 0.5 kg**

Enological yeast for vinification of Chardonnay.

**Aim of treatment**
Selected dry yeast for producing Chardonnays with a perfect balance between fruit flavors and creaminess.

**Product and effect**
LittoLevure Chardonnay develops grapefruit, lemon and tropical fruit aromas during fermentation. During Sur lie ageing the yeast can provide an additional positive effect. Mannoprotein can be released easily creating a nice creamy palate. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**LittoLevure Merlot**

**Packaging 0.5 kg**

Enological yeast to emphasize the typical Merlot wine profile.

**Aim of treatment**
Yeast strain for the production of full-bodied and harmonious Merlot wines.

**Product and effect**
LittoLevure Merlot creates a complex and typical Merlot aroma. Aroma notes such as black currant, cherry and plums complement the harmonious Merlot profile. The finished wines are full-bodied and characteristic. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**LittoLevure Pink**

**Packaging 10 kg**

Enological yeast Saccharomyces cerevisiae (var. bayanus) for the dry rosé wine with a distinct fruitiness.

**Aim of treatment**
LittoLevure Pink supports the rosé wine style. Wines present themselves lively, fresh and dry.

**Product and effect**
The color is a trendy pink with violet shades. Wines develop a floral aroma and notes of raspberries, red fruits and fine, delicate flavors. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**LittoLevure Sauvignon**

**Packaging 0.5 kg**

Enological yeast for the typical varietal character of Sauvignon Blanc.

**Aim of treatment**
LittoLevure Sauvignon unfolds a full spectrum of aromas during the fermentation of Sauvignon Blanc.

**Product and effect**
The varietal typicity of animating mineral and complex wines is attained through a support by elder blossoms and notes of currants, accompanied by tropical fruit flavors. The wines present themselves as round and balanced. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-30 g/100 L

**LittoLevure CHA**

**Packaging 10 kg**

Yeast for sparkling wine-making.

**Aim of treatment**
Selected yeast particularly suitable for bottle fermentation of high quality. Provides the sparkling wine with fine fruity components and creaminess on the palate.

**Product and effect**
Saccharomyces cerevisiae (bayanus), selected in the Champagne region (France) for the production of sparkling wine. The yeast combines high fermentation power with expressive fruit aromas. In order to achieve the optimal fermentation results, the use of VitaDrive F3 during rehydration and VitaFerm Ultra F3 during fermentation is advisable.

**Dosage**
20-40 g/100 L

**SPARKLING WINE**
FINING /
MICROBIOLOGICAL STABILIZATION
**LittoTabs**

Packaging: 1 etui = 16 blister packs with 3 tablets

Effervescent sulfur cachets for sulfur additions in small-size vessels.

**Aim of treatment**

LittoTabs are SO$_2$-releasing tablets, consisting of potassium disulfite and potassium hydrogen carbonate. The efficient portion is the potassium disulfite protecting wine from oxidation and undesired microbiological activity.

**Product and effect**

Potassium hydrogen carbonate leads to the bubbling effect of the sulfur cachets and thus to a homogeneous distribution in the vessel.

**Dosage**

- 1 tablet in 225 L (barrique) releases 22 mg SO$_2}$/L.
- 1 tablet in 600 L releases 8 mg SO$_2}$/L.
- 1 tablet in 1,000 L releases 5 mg SO$_2}$/L.

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**LittoClarvinyl**

Packaging: 1 kg

Treatment of bitter substances and off-flavors. Casein / PVPP blend.

**Aim of treatment**

LittoClarvinyl selectively removes various undesirable off-flavors and odors, phenolic components which cause bitterness, and oxidized compounds.

**Product and effect**

LittoClarvinyl is a powder product comprised of PVPP and milk casein combined with silicates and cellulose. The effect is caused by the synergy of the ingredients intensifying the effect of the single components. LittoClarvinyl represents a gentle fining without the risk of over-fining and with an excellent settlement in the tank.

**Dosage**

- 20-100 g/100 L (white and rosé wine)
- 10-20 g/100 L (red wine)

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**MannoSoft**

Packaging: 0.5 kg

Yeast cell wall preparation and polysaccharides.

**Aim of treatment**

Improvement of the wine’s mouthfeel and sensory impression.

**Product and effect**

Special formulation consisting of a yeast cell wall preparation with a high proportion of free mannoproteins and polysaccharides.

**Dosage**

- 5-30 g/100 L
LittoZym Sur lies

Highly active enzyme for optimized yeast lysis for improved structure and more density.

Aim of treatment
LittoZym Sur lies promotes the degradation of fine lees by cell wall perforation. This in turn causes liberation of mannoproteins from the cell wall to be accelerated.

Product and effect
In the further enzymatic process, yeast mannan and amino acids are released. Mannoprotein and yeast mannan lead to a more intensive, longer lasting mouthfeel and to a more creamy, mellow taste. The structure and the density are enhanced. Improved filterability.

Dosage
2-5 g/100 L

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