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2017 President’s Message.

2016 marked our grand Silver Anniversary year, and it was wildly successful in many ways.

First of all, my family and I thank all of you, our loyal customers, for your continued support and trust in our company, our products and suite of services. We could not exist without you.

So what's new for 2017 and ATPGroup?

Well, as a result of several near and long term succession plan meetings between my cousin Mark and I, we decided, that in order to be the foremost supplier of process and product solutions to the industries we serve, we would have to make investments in our future. To that end, we made further investments in key business professionals this past year. In so doing, we increased our capabilities in ATPGroup Global Source and Supply to better serve our existing portfolio as well as create new product solutions for the marketplace. We now have a new Global Supply Executive. With this key addition, we are evolving our Enterprise Management Systems and our Customer Service Group, which includes parts, service, warehousing, distribution and logistics, in order to facilitate superior customer satisfaction and first pass quality execution in commercial sales.

We also determined, to better serve our industries demands, our sales focus required more amplification in our Enology Products, Brewing Products, Luxury Products and Mobile Processing. To meet those needs, we set into motion several operating plans to increase our capabilities to better aid these markets, the effect of which will be seen during 2017 and beyond.

My family and our entire team at ATPGroup are excited about our future and the future of our customers companies and their prosperity. We are honored by your continued trust in our ability to serve you all.

So, we invite you to raise a glass to 2017 and the prosperity we all share.

Luca Zanin, President
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Enology Products – Enzymes

**Zyme-O-Clear Plus Liquid – Clarification Enzyme**
This enzyme preserves the freshness and aromatic qualities of the grapes and is designed primarily for settling white juices with the added ability to improve filtration rates. Pre-press application improves free-run press yields.
- Results in better compaction of the lees for reduced losses at racking.
- Increases the yield when added to the press.
- Created from non-GMO Aspergillus Niger strains.

**Application:** To be added directly to grapes prior to the press or to the tank prior to fermentation.

**Packaging:** 1 and 25 kg drums.

**Zyme-O-Color Plus Liquid – Maceration Enzyme**
Increases color extraction and stability especially when used in conjunction with ColorTan. Zyme-O-Color Plus enhances mouthfeel, structure and fruit character without an increase in bitterness.
- Improves filterability, particularly in Pinot Noir and Merlot.
- Optimizes the extraction of intracellular compounds such as tannins, anthocyanins and aroma compounds from the skins during maceration.
- Created from non-GMO Aspergillus Niger strains.

**Application:** To be added directly to grapes prior to the press or to the tank prior to fermentation.

**Packaging:** 1 and 25 kg drums.

**Zyme-O-Float Plus Liquid – Flotation Enzyme**
Specifically developed for use in the process of clarification by flotation in the production of white wines.
- Highly active and concentrated pectolytic enzyme preparation produced by classic fermentation of selected strains of Aspergillus niger.

**Application:** To be added directly to grapes prior to the press or direct to the tank prior to fermentation.

**Packaging:** 1 and 25 kg drums.

**Zyme-O-Xtra Liquid – Difficult to settle varietals**
Specifically developed for use in the production of difficult to settle varietals including Muscat, Viognier and French Hybrids.
- Highly active and concentrated pectolytic enzyme preparation produced by classic fermentation of selected strains of Aspergillus niger.
- Zyme-O-Xtra has significant pectin-lyase and arabanase activity.

**Application:** Can be used at any stage during the vinification process.

**Packaging:** 1 kg drums.

**Zyme-O-Stab**
Liquid pectinase enzyme with secondary protease activity specifically formulated for juice applications in conjunction with heat process technologies. The proper use of Zyme-O-Stab ensures a fast and effective reduction of proteins allowing so preserve aroma and reduce lees production.
- Better aromatic preservation.
- Reduce the need of fining like bentonite.
- Color protection in red.

**Application:** Use Zyme-O-Stab in juice or crushed production in conjunction with heat treatment like flash pasteurization or flash détente.

**Packaging:** 25 kg drums.

**Recommended Dosage:** 10 to 40 ml/ton.

**Zyme-O-Aroma Plus – Aroma Enhancing Enzyme**
Increases the free volatile terpenes in the wine by up to five fold. Also increases aromatic intensity and fruit character above threshold even in “non-aromatic” and varietals characterized by thiol aromas.
- Contains high amounts of secondary activities such as β-glucosidase and arabinosidase.
- Allows for the release of aromatic precursors from glycosidic conjugates of mono-terpenes and C13 norisoprenoids present in many aromatic varieties.
- Increases the transfer of aromatic precursors from the grape berry in the must.

**Application:** To be added directly to grapes prior to the press or to the tank prior to fermentation.

**Packaging:** 500 gram, 1 and 10 kg drums.

**Vin-Lyso (Lysozyme) – Microbial Control Agent**
This naturally-occuring enzyme isolated from egg whites prevents the growth of lactic acid bacteria which can inhibit primary fermentation or restarts. It also delays or prevents Malolactic Fermentation (MLF) at the juice stage and inhibits the production of VA from the Lactic Acid Bacteria when added prior to inoculating a stuck or slow fermentation.
- Naturally occurring enzyme isolated from egg whites.
- Inhibits the production of VA from the Lactic Acid Bacteria when added prior to reincultivating a stuck or slow fermentation.
- Inhibits MLF onset in a wine which has only partially completed MLF prior to bottling.

**Application:** Can be used at any stage during the vinification process.

**Packaging:** 500 gram and 5 kg pail.
Enology Products – Fermentation Tannins

Color-Tan Liquid and Powder Fermentation Tannin
For producing wines with smooth, full body and rounded structure by reacting with unstable proteins in the must.
- Higher doses add structure to tannin-deficient grapes.
- Also helpful at inhibiting the browning associated with Botrytis affected grapes.
- Extracted from Quebracho (condensed tannin) and Chestnut (hydrolysable tannin).
- Rapidly stabilizes color.
- Prevents indigenous tannins from binding with proteins and precipitating out.

**Application:** To be used during fermentation, ideally in two doses; at the beginning of fermentation and 2 – 3 days later.

**Packaging:** 1 kg packet, 25 kg box and 25 kg drum.

**Recommended Dosage:** 1 – 2 lb/1,000 gal powder, 2 – 4 lb/1,000 gal liquid.

Cherry-Tan Aging and Finishing Tannin
Unique composition designed to add complexity and structure to red and rosé wine styles without imposing itself or ‘blemishing’ the wine.
- Integrates perfectly within the wine's aromatic profile enhancing both the fruity and floral bouquet of the wine.
- Can be used in Red and Rosé wines at any stage.

**Application:** During fermentation, ideally this should be done in two doses on the 2nd and 4th day of fermentation. For rosé wines, only one dose on the 2nd day after the start of fermentation is required.

**Packaging:** 1 kg packet and 5 kg packet.

**Recommended Dosage:** 0.2 – 0.6 lb/1,000 gal.

Gallic-Tan Anti-Oxidant Tannin – Hydrolysable Tannin
Protects juice and wine from standard oxidation and the effects of Botrytis infected grapes.
- Acts as an aid during clarification to enhance fruit character in white wines.
- Can be added to heavily Botrytis affected reds in conjunction with Color-Tan.
- Selectively reacts with proteins and reduces the activity of laccase and tryosinase on anthocyanins and polyphenols, lowering the risk of oxidation.
- Acts as a taste corrector, especially when in the presence of Botrytis affected fruit.

**Application:** To be used on Botrytis affected fruit and at any stage that a wine may be exposed to oxidation.

**Packaging:** 1 kg and 25 kg drum.

**Recommended Dosage:** 0.4 – 1.2 lb/1,000 gal.

Enology Products – Fermentation Tannins

Color-Tan NT Fermentation Tannin
Formulated for its gentle impact on aromatic and flavor components while enhancing mouthfeel. Especially desirable when used with more delicate red grape varietals e.g. Pinot Noir or Merlot, which are low in natural tannin content.
- It is a blend of gallic polyphenols, effective antioxidants, with condensed polyphenols, responsible for the bonding of anthocyanins.
- It is formulated for its gentle impact on aromatic and flavor components while enhancing mouthfeel and color stability.
- Prevents indigenous tannins from binding with proteins and precipitating out.

**Application:** To be used during fermentation, ideally in two doses at the beginning of fermentation and 2 – 3 days later.

**Packaging:** 1 kg packet and 25 kg box.

Querca-Tan Blanc Aging and Finishing Tannin
Anti-oxidative properties are ideal for use at the beginning of fermentation to regulate the oxi-reductive potential, complex the oxygen and prevent browning.
- Gives a very mild oak aroma to the wines enhancing the mature fruit bouquet.
- Simple extract of aged oak wood without any chemical treatment or heating.
- Extracted from wood of Quercus robur (English Oak) and petraea (Oak).
- For white and rosé wines where a strong wood note could be unpleasant.

**Application:** Exceptional for micro-oxygenation, especially in wines where it is necessary to maintain the varietal fruit notes.

**Packaging:** 1 kg packet.

**Recommended Dosage:** 0.1 – 0.5 lb/1,000 gal.

Querca-Tan Rouge Aging and Finishing Tannin
Improves the concentration of wood aroma precursors giving the wine a soft oak bouquet.
- Extracted from the wood of Quercus robur (English Oak) and petraea (Oak).
- Simple extract of aged oak wood without any chemical or heat treatment.
- Reduces oxygen concentration, deactivates the polyphenols oxidase activity and protects the color.

**Application:** Can be used at any stage of wine production from the beginning of fermentation or prior to barrel maturation or micro-ox.

**Packaging:** 1 kg packet.

**Recommended Dosage:** 0.1 – 0.5 lb/1,000 gal.

Gallic-Tan Anti-Oxidant Tannin – Hydrolysable Tannin
Protects juice and wine from standard oxidation and the effects of Botrytis infected grapes.
- Acts as an aid during clarification to enhance fruit character in white wines.
- Can be added to heavily Botrytis affected reds in conjunction with Color-Tan.
- Selectively reacts with proteins and reduces the activity of laccase and tryosinase on anthocyanins and polyphenols, lowering the risk of oxidation.
- Acts as a taste corrector, especially when in the presence of Botrytis affected fruit.

**Application:** To be used on Botrytis affected fruit and at any stage that a wine may be exposed to oxidation.

**Packaging:** 1 kg and 25 kg drum.

**Recommended Dosage:** 0.4 – 1.2 lb/1,000 gal.
**Enology Products – Fining Agents, Stabilizers and Antioxidants**

**Fermo-Casein Juice and Wine Fining Agent**
Potassium caseinate based fermentation aid designed to produce wines that are stable from all standpoints: catechins, proteins and polyphenols. Adsorbs the oxidizable polyphenols and stabilizes the proteins in the must.
- Electrostatically charged cellulose fibers not only improve the action of the bentonite, but adsorb the fatty acids produced by the yeast during stressful fermentations.

**Application:** To be added to the tanks once fermentation has started.

**Packaging:** 20 kg bag.

**Recommended Dosage:** 1 – 4 lb/1,000 gal.

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**Isinglass – Fining Agent**
Primarily used for the clarification of white wines, it gives a brilliant clear wine with less dramatic effect on body compared to gelatin or PVPP. Low doses in red wines smooths out mid-palate astringency.
- A preparation of protein collagen from the swim bladders of sturgeon.
- Isinglass reacts with the monomers and smaller polyphenolic compounds and can aid in the removal of harsh taste sensations.

**Application:** Can be added at any stage of the winemaking process.

**Packaging:** 1 kg packet.

**Recommended Dosage:** 0.1 – 0.25 lb/1,000 gal.

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**Liquagel-50 – Fining Agent**
Designed to remove the tannins normally attributed to astringency without reaction with the anthocyanins responsible for color.
- In red and white wines results are a softer wine less susceptible to oxidation.
- Improves the taste of wines by stabilizing and enhancing tannins.
- A ready to use ultra pure liquid gelatin.
- Provides body and suppleness to the wines by removing the aggressive and astringent tannins.

**Application:** To be added at any stage of the winemaking process to reduce astringency.

**Packaging:** 25 kg and 200 kg drum.

**Recommended Dosage:** 0.25 – 4 lb/1,000 gal.

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**Liquasil-30 – Fining Agent**
A 30% Silicon Dioxide solution designed for clarification of must and wine to increase the efficiency of protein fining agents such as Liquagel-50 while preventing over fining.
- Negative charge of the Liquasil-30 combined with the positive charge of the Liquagel-50, creates a flocculating “net” which forces solids to the bottom of the tank.
- Designed for must clarification but can be used on wines.
- Should be used in conjunction with Liquagel-50 liquid gelatin.

**Application:** To be added at any stage of the winemaking process to reduce astringency.

**Packaging:** 25 kg drum.

**Recommended Dosage:** 1 – 5 lb/1,000 gal.

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**Ovo-Pure – Fining Agent**
Spray dried pure egg albumin obtained from fresh eggs.
- Designed to combine with polyphenols and unstable anthocyanins eliminating astringent tannins and the oxidizable color matter, which precipitate in the bottle.
- Also recommended for use on finished reds.
- Recommended for applications where gelatin or casein are too aggressive.

**Application:** Can be added at any stage of the winemaking process to reduce astringency.

**Packaging:** 1 kg, 10 kg and 25 kg bag.

**Recommended Dosage:** 0.25 – 3 lb/1,000 gal.

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**Phenol-Fine – Fining Agent**
Anti-oxidizing fining agent recommended for the fining of wines that are subject to oxidation, maderization or haze formation. Intended as a preventative measure but also effective in treating wines that are already oxidized. Use with PVPP to treat oxidized and oxidizable polyphenols in juice.
- Acts as a deodorant and selective decolorant in high quality white and rosé wines where the use of carbon can be too aggressive.

**Application:** Can be added at any stage of the winemaking process.

**Packaging:** 25 kg bag.

**Recommended Dosage:** 1 – 8 lb/1,000 gal.
Enology Products – Fining Agents, Stabilizers and Antioxidants

LGA-30 – Stabilizer
30 percent liquid gum arabic solution derived from the solubilization of the Gum Arabic of the most selected varieties of the Acacia tree.
- 30% liquid gum arabic solution finished by micro-filtration to ensure maximum ease of use.
- With an electropositive charge, LGA-30 can be used as a colloidal protector which will prevent haze formation due to instabilities while stabilizing color.
- Other benefits: Enhance body and structure, increase roundness on the palate, inhibit formation and precipitation of tartrate crystals.
Application: To be added prior to final filtration.
Packaging: 25 kg and 200 kg drum.
Recommended Dosage: 1 – 6 lb/1,000 gal.

LGA-20 – Stabilizer
LGA-20 is a colloidal solution derived from the solubilization of the Gum Arabic of the most selected varieties of the Acacia tree.
- 20% liquid gum arabic solution finished by micro-filtration to ensure maximum ease of use.
- With an electropositive charge, LGA-20 can be used as a colloidal protector which will prevent haze formation due to instabilities while stabilizing color.
- Increases roundness on the palate as well as body and structure.
Application: To be added prior to the final filtration.
Packaging: 25 kg and 200 kg drum.
Recommended Dosage: 1 – 10 lb/1,000 gal.

Puri-Bent – Fining Agent and Stabilizer
Pure, highly refined bentonite obtained from highest-quality montmorillonite clay.
- The extraordinary adsorption properties and high swelling capacity insures the lowest possible dosage rates.
- Acts by removing proteins and polyhydric phenols.
- Recommended for use in all musts or wines.
Application: To be added at any stage of the winemaking process to achieve protein stability.
Packaging: 25 kg bag.
Recommended Dosage: 1 – 4 lb/1,000 gal.

PVPP-V – Polyclar V
This highly-effective wine stabilizer is optimized for maximum, fast-acting reduction of polyphenols, such as leucoanthocyanadins and catechins that may cause “pinking” and “browning” through oxidative polymerization.
- Average particle size of around 25 microns.
Application: To be added at any stage of the winemaking process.
Packaging: 44 lb drum.
Recommended Dosage: 1 – 6 lb/1,000 gal.

PVPP-VT – Polyclar VT
Primary function is to remove phenolic compounds from white wines and/or be added to vessels where faster settling is required.
- Also effective in removal of astringency in reds without removing color as a non-allergenic fining alternative.
- Average particle size of around 110 microns.
Application: Can be added at any stage of the winemaking process.
Packaging: 50 lb drum.
Recommended Dosage: 1 – 6 lb/1,000 gal.

MustGuard – Antioxidant
Ascorbic Acid based blend particularly effective in preventing oxidation in machine-picked grapes or where grapes are shipped long distances to winery.
- To be added to grapes during harvesting.
- Acts aggressively in preventing oxidation of the juice in the harvesting bins from mechanically harvest grapes.
- Ideally suited for all white grape varieties, especially where rot or botrytis is present.
Application: Sprinkle the dose over grapes as soon as they are harvested.
Packaging: 5 kg bag.
Recommended Dosage: 1 – 2 lb/1 U.S. ton of grapes.
**Enology Products – Fining Agents, Stabilizers and Antioxidants**

**Defy-Ox – Antioxidant**
An Ascorbic Acid and SO₂ based blend giving maximum protection in preventing oxidation in finished wines as a pre-bottling addition.
- Treated wines remain cleaner, fresher and retain a better organoleptic profile over time.
- Acts powerfully as a preventive measure and as a cure on wines which tend to oxidize by lowering the oxidation-reduction potential.
**Application**: Pre-bottling addition.
**Packaging**: 1 kg bag.
**Recommended Dosage**: 1 – 4 lb/1,000 gal.

**Coldstab Cel – Tartaric Stabilization**
Coldstab Cel is a specific carboxymethylcellulose (CMC) solution for stabilization of wine by prevention of tartrate precipitation. Optimized for enological use, this 10% solution has a high stabilizing strength and does not impact the filterability of a wine when used according to manufacturer’s instructions.
- Ready to use.
- Low viscosity product to avoid affecting filterability.
- High concentration to reduce dosing rate require.
**Application**: white and rosé wines.
**Packaging**: 25 kg - 1,000 kg.
**Recommended Dosage**: 4 - 8 lb/1,000 gals.

**Clarmix**
Highly effective fining agent formulated to selectively reduce the content of micro catechines in wine generally responsible to cover wine aromas. Clarmix is also effective on reducing brettanomyces off aromas. Clarmix is the ideal tool in the hands of the winemaker to achieve a very accurate clarification result.
- Easy to dissolve and use.
- Effective replacement of potassium caseinate.
- Non allergenic.
**Application**: white and red wines and juices.
**Packaging**: 1 kg.
**Recommended Dosage**: 0.2 – 1.7 lb/1,000 gals.

**Spring’Finer – Allergen Free Fining**
Exclusively from yeast origins, this yeast protein extract, Spring’Finer, is allergen-free and can be considered the sole fining agent totally integrated in wine elaboration.

**Activegel**
High electrical charge gelatin produced with the specific goal of improving flotation processes, both batch and continuous systems.
- Highly effective in flotation and juice setting.
- Low dosage required.
- Easily soluble in room temperature water.
- High activity on improving wine filterability.
**Application**: Juice and wine.
**Packaging**: 20 kg.
**Recommended Dosage**: From 0.2 to 0.9 lb/1,000 gals, depending on juice or wine type.

**Clarcoll**
Highly purified fish protein, produced with an innovative process to maximize surface charge without the need for pre-dissolution in water.
- Easily soluble.
- Effective at low dosages.
- Improves wine filterability.
- Very effective on reducing bitterness and astringency.
**Application**: Red and white wine.
**Packaging**: 1 kg.
**Recommended Dosage**: 0.2 to 0.8 lb/1,000 gals. For highly turbid wines up to 2.5 lb/1,000 gals.

**Coldstab Cel** is a specific carboxymethylcellulose (CMC) solution for stabilization of wine by prevention of tartrate precipitation. Optimized for enological use, this 10% solution has a high stabilizing strength and does not impact the filterability of a wine when used according to manufacturer’s instructions.

**Application**: Juice and wine.
**Packaging**: 20 kg.
**Recommended Dosage**: From 0.2 to 0.9 lb/1,000 gals, depending on juice or wine type.

**Clarmix** is the ideal tool in the hands of the winemaker to achieve a very accurate clarification result.
- Easy to dissolve and use.
- Effective replacement of potassium caseinate.
- Non allergenic.
**Application**: white and red wines and juices.
**Packaging**: 1 kg.
**Recommended Dosage**: 0.2 – 1.7 lb/1,000 gals.

**Activegel** is a high electrical charge gelatin produced with the specific goal of improving flotation processes, both batch and continuous systems.
- Highly effective in flotation and juice setting.
- Low dosage required.
- Easily soluble in room temperature water.
- High activity on improving wine filterability.
**Application**: Juice and wine.
**Packaging**: 20 kg.
**Recommended Dosage**: From 0.2 to 0.9 lb/1,000 gals, depending on juice or wine type.
**Enology Products—Aging and Finishing Tannins**

**Cherry-Tan Aging and Finishing Tannin**

Unique composition designed to add complexity and structure to red and rosé wine styles without imposing itself or ‘blemishing’ the wine.
- Integrates perfectly within the wine’s aromatic profile enhancing both the fruity and floral bouquet of the wine.
- Post fermentation use allows for the creation of an optimal oxi-reductive potential to free the esters and terpenes which accentuate the hidden fruit and berry notes.
**Application:** To be added to red and rosé wines after fermentation, during micro-oxygenation and up to 1 month prior to bottling.
**Packaging:** 1 kg packet and 5 kg packet.
**Recommended Dosage:** 0.1 – 4 lb/1,000 gal.

**Querica-Tan Rouge Aging and Finishing Tannin**

Improves the concentration of wood aroma precursors giving the wine a soft oak bouquet and increased complexity.
- Extracted from the wood of Quercus robur (English Oak) and petraea (Oak).
- Simple extract of aged oak wood without any chemical or heat treatment.
- Reduces oxygen concentration, deactivates the polyphenols oxidase activity and protects the color.
**Application:** Can be used at any stage of wine production from the beginning of fermentation or prior to barrel maturation or micro-ox.
**Packaging:** 1 kg packet.
**Recommended Dosage:** 0.1 – 0.5 lb/1,000 gal.

**Cherry-Tan Blanc Aging and Finishing Tannin**

Anti-oxidative properties can reduce potential for growing and lower the total amount of SO₂ required due to aging.
- Gives a very mild oak aroma to light and rosé wines enhancing the complexity of the fruit bouquet.
- Simple extract of aged oak wood without any chemical treatment or heating.
- Extracted from wood of Quercus robur (English Oak) and petraea (Oak).
- For white and rosé wines where a strong wood note could be unpleasant.
**Application:** Exceptional for micro-oxygenation, especially in wines where it is necessary to maintain the varietal fruit notes.
**Packaging:** 1 kg packet.
**Recommended Dosage:** 0.1 – 0.5 lb/1,000 gal.

**Querica-Tan VN (Powder and Liquid) Aging and Finishing Tannin**

Helps to stabilize color and improve sensory attributes of the wine.
- Prolongs the aromatic persistency and softens the finish, while enhancing the aromatic complexity with nuances of sweet vanilla and cacao.
- Composed of Gallio-Ellagic tannins extracted from medium toasted American Oak.
- Bestows the typical organoleptic notes usually derived from barrel maturation.
**Application:** To be used at any stage of wine production — ideally prior to barrel maturation or micro-ox.
**Packaging:** 500 gram packet (powder) and 1 kg bottle (liquid).
**Recommended Dosage:** 0.15 – 1.2 lb/1,000 gal (powder), 0.3 – 2.4 lb/1,000 gal (liquid).

**Querica-Tan UT Aging and Finishing Tannin**

Adds mid and back palate richness.
- Anti-oxidant effects protect wines from loss of aromatics and fruit character.
- Composed of Gallio-Ellagic tannins extracted from untoasted American Oak.
- Protects the wine from both oxidative and reductive media that produce serious defects in wine.
- It overcomes some of the problems associated with barrel aged wines (loss of favors, oxidation).
**Application:** Can be used at any stage of wine production — ideally prior to barrel maturation or micro-ox.
**Packaging:** 500 gram bottle.
**Recommended Dosage:** 0.4 – 1.2 lb/1,000 gal.

**Querica-Tan MK Aging and Finishing Tannin**

Enhances aromatic complexity with nuances of spicy mocha and chocolate.
- Ability to stabilize color and to improve sensory attributes of the wine.
- Prolongs the aromatic persistency and softens the finish.
- Bestows the typical organoleptic notes usually derived from barrel maturation.
- Composed of Gallio-Ellagic tannins extracted from heavily toasted American Oak.
**Application:** To be used at any stage of wine production — ideally prior to barrel maturation or micro-ox.
**Packaging:** 500 gram and 1 kg bottle.
**Recommended Dosage:** 0.15 – 1.2 lb/1,000 gal.

**Querica-Tan UT Aging and Finishing Tannin**

Improves the concentration of wood aroma precursors giving the wine a soft oak bouquet and increased complexity.
- Extracted from the wood of Quercus robur (English Oak) and petraea (Oak).
- Simple extract of aged oak wood without any chemical or heat treatment.
- Reduces oxygen concentration, deactivates the polyphenols oxidase activity and protects the color.
**Application:** Can be used at any stage of wine production from the beginning of fermentation or prior to barrel maturation or micro-ox.
**Packaging:** 1 kg packet.
**Recommended Dosage:** 0.1 – 0.5 lb/1,000 gal.

**Enology Products—Aging and Finishing Tannins**
**Enology Products—Aging and Finishing Tannins**

**Tani-Heritage**
Tani-Heritage is a high-end formulation of ellagic and catechinic tannins. The specific toasting process adopted in producing Tani-Heritage allows the extraction of an important polyphenolic fraction that is extremely active on color stabilization along with valuable aromatic precursors that are actively used by the yeast to release pleasant notes of toasted oak.

- Color stabilization
- Important source of aromatic precursors during fermentation
- Great tannin for Micro oxygenation
- Increases wine structure
- Strong antioxidant activity

**Application:** Tani-Heritage has a wide range of applications.
- When used during fermentation, or soon after, it will positively impact color stabilization.
- On finished wines Tani-Heritage is the ideal tannin to work in conjunction with micro-oxygenation to improve structure and aromatic complexity.

**Packaging:** 1 kg.

**Recommended Dosage:** In fermentation: 0.6 – 1.5 lb/1,000 gal.; Finished wine: 0.3 – 0.6 lb/1,000 gal.

**Tani-Complete Aging and Finishing Tannin**
Broad palate enhancement in reds and whites.

- Maintains the aromatic characteristics improving the final bouquet in red wines.
- Contributes to anti-oxidation as well as color preservation.
- Added during the aging of white wines in barrels to prevent oxidation while adding complexity to the palate.
- Oak extracted from the heart of the Limousin oak region in France.

**Application:** To be used at any stage of wine production — ideally prior to barrel maturation or micro-ox.

**Packaging:** 1 kg bottle.

**Recommended Dosage:** 0.2 – 1.6 lb/1,000 gal.

**Tani-Grape Aging and Finishing Tannin**
Enhances wine structure and body especially in naturally tannin deficient wines.

- Helps prevent color oxidation.
- Stimulates polymerization resulting in the binding of the anthocyanins resulting in a wine which has softer tannins and improved structure.
- Softens the palate structure.
- Extracted entirely from the grape.

**Application:** To be used at any stage of wine production — ideally prior to bottling.

**Packaging:** 500 gram bottle and 1 kg bag.

**Recommended Dosage:** 0.2 – 2.0 lb/1,000 gal.

**Tani-Structure Aging and Finishing Tannin**
Strengthens and amplifies the tannin structure.

- Contributes to the stability of the anthocyanins and to preventing their oxidation and self condensation.
- Extracted from Quebracho.
- Useful during micro-oxygenation, and in some cases to reduce astringency and herbaceous characters.

**Application:** To be used at any stage of wine production — ideally prior to barrel maturation or micro-ox.

**Packaging:** 1 kg packet.

**Recommended Dosage:** 0.2 – 1.2 lb/1,000 gal.

**Notes**
**Enology Products – Fermentis Safoeno Yeast**

### Active Dry Wine Yeast

<table>
<thead>
<tr>
<th>Characteristics</th>
<th><strong>CK S102</strong></th>
<th><strong>BC S103</strong></th>
<th><strong>VR 44</strong></th>
<th><strong>UCLM 5325</strong></th>
<th><strong>UCLM 5377</strong></th>
<th><strong>SC22</strong></th>
<th><strong>NDA 21</strong></th>
<th><strong>HD S62</strong></th>
<th><strong>HD S135</strong></th>
<th><strong>GV S107</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>White*</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
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<tr>
<td>Rose*</td>
<td>4</td>
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<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
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<td>Red*</td>
<td>3</td>
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<td>4</td>
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<tr>
<td>Late Harvest*</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4 (fortified)</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Killer factor</td>
<td>Neutral</td>
<td>Killer</td>
<td>Sensitive</td>
<td>Killer</td>
<td>Neutral</td>
<td>Sensitive</td>
<td>Neutral</td>
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<td>Foam formation</td>
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<tr>
<td>Fermentation</td>
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<td>Quick</td>
<td>Very</td>
<td>Quick</td>
<td>Slow</td>
<td>Quick</td>
<td>Very</td>
<td>Quick</td>
<td>Slow</td>
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<tr>
<td>Kinetics</td>
<td>Sugar (g/l)for 1% vol. of ethanol</td>
<td>16.5</td>
<td>16.5</td>
<td>16.2</td>
<td>16.5</td>
<td>16.5</td>
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<td>16.5</td>
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<tr>
<td>Production of VA</td>
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<td>Average</td>
<td>Very Low</td>
<td>Average</td>
<td>Very Low</td>
<td>Average</td>
<td>Average</td>
<td>Average</td>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>Production of SO2 (mg/l)</td>
<td>Very Low</td>
<td>Average</td>
<td>Very Low</td>
<td>Average</td>
<td>Very Low</td>
<td>Average</td>
<td>Average</td>
<td>Average</td>
<td>Average</td>
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<tr>
<td>Production of glycerol (g/l)</td>
<td>6 to 7</td>
<td>5 to 6</td>
<td>5 to 6</td>
<td>ND</td>
<td>8 to 10</td>
<td>9 to 10</td>
<td>4 to 5</td>
<td>7 to 8</td>
<td>5 to 6</td>
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<tr>
<td>% Alcohol tolerance</td>
<td>13</td>
<td>14.5</td>
<td>18</td>
<td>16.5</td>
<td>13</td>
<td>15</td>
<td>16</td>
<td>above 15</td>
<td>above 15</td>
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<tr>
<td>Temp. range C</td>
<td>8 to 30</td>
<td>8 to 25</td>
<td>10 to 35</td>
<td>10 to 40</td>
<td>12 to 35</td>
<td>16 to 35</td>
<td>12 to 35</td>
<td>15 to 35</td>
<td>17 to 24</td>
<td>17 to 24</td>
</tr>
</tbody>
</table>

*High # = Suitable; Low # = less suitable

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**St. Georges S101**

Recommended for fermentation styles calling for cold soak and/or carbonic maceration.

- Ideal for red, white and rosé styles being fermented between 40⁰–50⁰ F (8⁰–10⁰ C).
- Alcohol tolerant between 12.5% – 13%, low VA, H2S and SO2 production and has medium nitrogen requirements as well as medium glycerol production (5g/L).
- Wines produced are characterized by high ester production.
- S. cerevisiae; x. cerevisiae

**Application:** Suited for Grenache, Pinot Noir, Gamay and Rosé styles.

**Packaging:** 500 gram packet & 10 kg box.

**Recommended Dosage:** 2 lb/1,000 gal.

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**BC S103**

Fermentis’s most alcohol tolerant strain, up to 18%.

- Adapted to restart stuck or sluggish fermentations due to its high alcohol tolerance and low relative nitrogen requirements.
- Excellent fermentation characteristics including strong kinetics, low VA production, low nitrogen requirements and short lag phase.
- Known for clean fermentations that respect varietal character.
- Excellent fructose assimilation.
- Wide fermentation temperature spectrum: 10 – 35 °C.
- S. cerevisiae; x. bayanus.

**Application:** Suited for red and white varietals including Chardonnay, Sparkling Base, Zinfandel and Syrah.

**Packaging:** 500 gram packet and 10 kg box.

**Recommended Dosage:** 2 lb/1,000 gal.

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**HD S62**

Yeast (Saccharomyces cerevisiae x Saccharomyces bayanus). Safoeno™ HD S62 is characterized by a low production of higher alcohols and esters. This strain will so help to produce very elegant reds in respect with the cultivar such as Premium Cabernet Sauvignon, Merlot, Tempranillo, Malbec, Sangiovese, Grenache…

- Rapid fermentation start.
- Fast kinetics.
- High alcohol tolerance > 15% vol.vol.
- Good fructose assimilation.
- Medium-low nitrogen requirements.
- Strong malic acid consumption.

**Application:** Has especially been selected for its ability to strongly extract polyphenols.

**Packaging:** 500 gram packages.

**Recommended Dosage:** 2 lb/1,000 gal.
**Enology Products – Fermentis Sapheno Yeast**

**GV S107**
This yeast is characterized by a rapid start in fermentation but by a slow kinetics at low temperature enabling the production of high quality wines in barrels and/or aged on lees like premium whites.
- Excellent fructose assimilation.
- Wide fermentation temperature spectrum: 15 – 30 °C (69 – 86 °F)
- Good alcohol tolerance: up to 15% vol./vol.
- Medium-slow kinetics at low temperature (17 °C – 63 °F) and medium nitrogen requirements with high SO2 resistance.
**Application:** Especially selected for premium whites.
**Packaging:** 500 gram packages.
**Recommended Dosage:** 2 lbs/1,000 gal.

**SC 22**
SC 22 is characterized by a short lag phase with alcohol tolerance to 15% and medium nitrogen requirements.
- This very low producer of volatile acidity is ideally suited for barrel fermentation and is recommended for premium varieties. S. cerevisae; x. cerevisiae.
- Rapid fermentation starter with alcohol tolerance to 15% and medium nitrogen requirements as well as a very low producer of volatile acidity (<0.15 g/L) and SO2.
- The very first strain selected for a wine application (UC Davis 522).
**Application:** Suited for all varieties, especially Chardonnay, Sauvignon Blanc, Chenin Blanc, Cabernet Sauvignon and Merlot.
**Packaging:** 500 gram packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.

**UCLM S325**
Ideal for aromatic white wines, particularly those with terpenic varietal aromas due to its beta-glucosidase activity.
- Adds structure to light, low aromatic white wines. S. cerevisae; x. cerevisiae.
- Good alcohol tolerance (13%), low VA, H2S and SO2 production and has strong nitrogen requirements as well as high glycerol production (10g/L).
- Noted for its beta-glucosidase activity on bound terpenes that leads to excellent organoleptic results.
**Application:** Suited for Gewurztraminer, Muscat, Riesling, Viognier, Pinot Gris, Chenin Blanc, Sauvignon Blanc, Colombard and Semillon.
**Packaging:** 500 gram packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.

**VR 44**
Selected in the Champagne region of France, VR 44 is characterized by excellent fermentation kinetics, respect for varietal aromatics and resistance to extreme winemaking conditions.
- Respects the varietal and terroir characters of the wine. S. cerevisiae; x. bayanus.
- Ideal for fermentations under controlled temperature in white wines and tank-fermented whites as well as Zinfandel or any other high Brix reds.
- Low foam production, low nitrogen requirements and low SO2 production.
**Application:** Suited for Semillon, Chardonnay, Cabernet Sauvignon and Merlot.
**Packaging:** 500 gram packet.
**Recommended Dosage:** 2 lb/1,000 gal.

**Enology Products – Fermentis Sapheno Yeast**

**UCLM S377**
Ideal for production of high quality red wines with respect for fruit components of varietal character.
- Low color adsorption is helpful for grapes sensitive to color loss. S. cerevisae; x. bayanus.
- Due to its high glycerol production (8g/L) U.C.L.M., S377 is recommended for improving mouthfeel, especially in high tannic red wines and particularly appropriate in old-vines reds and fermentations where extended maceration is desirable.
- Good alcohol tolerance (15%), low VA, H2S and SO2 production and normal to high nitrogen requirements.
**Application:** Suited for Cabernet Sauvignon, Shiraz, Cabernet Franc, Pinot Noir, Zinfandel and Chardonnay.
**Packaging:** 500 gram packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.

**HD S135**
Recommended for the production of harmonious, full bodied wines with persistent fruit and spice aromatics within a shorter fermentation time.
- The wines are characterized by intense color and intense and persistent fruity and spicy notes. The high production of glycerol provides roundness and excellent balance to finished wines. S. cerevisae; x. cerevisiae.
- Low absorption of color pigments by the cell wall.
- Very good alcohol tolerance (16%), low VA, H2S and SO2 production and low nitrogen requirements as well as high glycerol production (8g/L).
**Application:** HD S135 amplifies sensorial characteristics in still white & red wines.
**Packaging:** 500 gram packet.
**Recommended Dosage:** 2 lb/1,000 gal.

**NDA 21**
Recommended for the production of harmonious, full bodied wines with persistent fruit and spice aromatics within a shorter fermentation time.
- The wines are characterized by intense color and by intense and persistent fruity and spicy notes. The high production of glycerol provides roundness and excellent balance to finished wines. S. cerevisae; x. cerevisiae.
- Low absorption of color pigments by the cell wall.
- Very good alcohol tolerance (16%), low VA, H2S and SO2 production and low nitrogen requirements as well as high glycerol production (8g/L).
**Application:** Suited for Merlot, Cabernet Sauvignon, Zinfandel and Syrah.
**Packaging:** 500 gram packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.
Enology Products–Red Star Yeast

Premier Blanc

This Saccharomyces bayanus strain is a strong fermenter with excellent alcohol tolerance (18%) and will readily ferment grape musts and fruit juices to dryness.
- It is very respectful of varietal character and balanced mouthfeel.
- Derived from a pure culture slant of the institute Pasteur in Paris (Davis 595).
- Good tolerance to sulfur dioxide.
- Although flocculent, it is not commonly used for sparkling wines.
- This product was formally known as Pasteur Blanc or Pasteur Champagne.
- S. cerevisiae; x. bayanus.

Application: Best suited for white, red and fruit wines.
Recommended Dosage: 2 lb/1,000 gal.

Premier Cuvée

Fast, neutral fermenter that is the most all-purpose yeast available.
- This yeast was particularly adapted to difficult fermentation conditions due to its high alcohol tolerance (16.5%) and low relative nitrogen requirements.
- Particularly adapted to restart stuck or sluggish fermentations due to its high alcohol tolerance and low relative nitrogen requirements.
- Low producer of foam, urea, and fusel oils.
- S. cerevisiae; x. bayanus.

Application: Suited for red and white varieties including Chardonnay, Sparkling Base, Merlot and Cabernet Sauvignon.
Packaging: 500 gram packet and 10 kg box.
Recommended Dosage: 2 lb/1,000 gal.

Premier Côte des Blancs

A slower fermenting, low foaming yeast, Premier Côte des Blancs produces wines characterized by fine, fruity aromatics.
- Fermentations can be controlled by lowering temperature to finish with some residual sugar.
- Suited for aromatic whites and Chardonnays, particularly where some residual sugar is desired, light young reds and sparkling cuvée.
- Alcohol tolerant to 13%.
- Derived from a selection at the Geisenheim Institute in Germany (Davis 750).
- Slow fermenter, identical to the Geisenheim Epernay, but less foam producing.
- Has a high nitrogen requirement to ensure the maintenance of fruity aromas.
- S. cerevisiae; x. cerevisiae.

Application: Suited for residual sugar wines, light young reds and sparkling cuvée.
Packaging: 500 gram packet and 10 kg box.
Recommended Dosage: 2 lb/1,000 gal.

Premier Rouge

Encourages the development of varietal fruit flavors balanced by complex aromas, especially in varietals from the Cabernet family.
- Premier Rouge is a strong even fermenter that produces full bodied reds.
- Good alcohol tolerance to 15%.
- Derived from the collection of the Institute Pasteur in Paris (Davis 904).
- It may be necessary to cool fermenting must to prevent unwanted temperature increase.
- S. cerevisiae; x. cerevisiae.

Application: Suited for red wines especially Cabernet Sauvignon and Cabernet Franc.
Packaging: 500 gram packet & 10 kg box.
Recommended Dosage: 2 lb/1,000 gal.

Premier Classique

Produces dry white and red wines with good flavor complexity and full body.
- A strong fermenter with good alcohol tolerance up to 15%.
- Premier Classique (Davis 522) has been derived from the collection of the University of California.
- This yeast has good tolerance to free sulfur dioxide.
- Not recommended for grapes dusted with sulfur, because of the tendency to produce hydrogen sulfide in the presence of higher concentrations of sulfur.
- It does produce good flavor complexity, and intense color.
- This product was formally known as Montrachet.
- S. cerevisiae; x. cerevisiae.

Application: Suited for whites and full-bodied reds.
Packaging: 500 gram packet and 10 kg box.
Recommended Dosage: 2 lb/1,000 gal.

Premier Cuvée

Encourages the development of varietal fruit flavors balanced by complex aromas, especially in varietals from the Cabernet family.
- Premier Rouge is a strong even fermenter that produces full bodied reds.
- Good alcohol tolerance to 15%.
- Derived from the collection of the Institute Pasteur in Paris (Davis 904).
- It may be necessary to cool fermenting must to prevent unwanted temperature increase.
- S. cerevisiae; x. cerevisiae.

Application: Suited for red wines especially Cabernet Sauvignon and Cabernet Franc.
Packaging: 500 gram packet & 10 kg box.
Recommended Dosage: 2 lb/1,000 gal.
Springferm Xtrem
For difficult fermentation conditions.
• Designed for musts coming from overripe grapes that are often very poor in nitrogen (<150mg/L) and rich in fermentable sugars (potential alcohol >13.5%) which represent a favorable environment for stuck or sluggish fermentations.
• 100% organic fermentation activator based on fully autolyzed yeast, 9 times richer in available nitrogen than a basic inactivated yeast.
• Also recommended for production of organic wines where DAP cannot be used.
• The organoleptic profile is improved even more when Springferm Xtrem is combined with Springferm at the beginning of fermentation.

Application:
Springferm Xtrem can be used as a rehydration product or 24 hours after the fermentation has started and if required again at mid-fermentation.
Packaging:
1 kg box.
Recommended Dosage: 2 – 4 lb/1,000 gal depending on YAN.

Springferm
100% organic multi-purpose fermentation activator derived completely from yeast.
• Based on partially autolyzed yeast and 3 times richer in available nitrogen than a basic inactivated yeast.
• TTB Limit 15 lb/1,000 gal based on yeast hull content.
• Derived directly from yeast, Springferm supplies amino acids, sterols, minerals & vitamins, and natural thiamine, and represents an amino acid nitrogen source that allows the winemaker to determine the optimal balance between organic and mineral nitrogen in the must.

Application:
To be used as a rehydration product or 24 hours after the fermentation has started and if required again at mid-fermentation.
Packaging:
25 kg bag.
Recommended Dosage: 2 – 4 lb/1,000 gal depending on YAN.

Springcell
Natural derived fiber-rich yeast cell wall product contains no additives and is readily dispersible in water, must or fermenting must.
• Especially useful in preventing stuck fermentations or ‘cleaning’ stuck ferments prior to restarting.
• TTB Limit 3.0 lb/1,000 gal.

Application:
To be used at the start of fermentation. At later stages, as solution to sluggish or stuck ferments.
Packaging:
50 lb bag
Recommended Dosage: 1 – 3 lb/1,000 gal.
Focusing on fermentative power and ease of use, ATPGroup is proud to introduce Fermentis’ latest development in yeast nutrition, ViniLiquid! ViniLiquid is a highly autolysed liquid yeast preparation combining the benefits of yeast derivatives and pure yeast hulls. The completely solubilized liquid format allows for easy, accurate dosing, immediate and complete integration in the juice/must when gently mixed and no dust or inhalation hazards!

Figure 1 shows the fermentation kinetic advantage of using ViniLiquid vs. DAP, DAP with oxygen at Vmax, and powdered forms of equivalent nutrition. Using Viniliquid, fermentations came to a completion over 40% faster than DAP alone, and over 10% faster than equivalent yeast derivative/pure hulls when added in powder form.

Figure 2 shows the residual sugars at 238h of fermentation. Note the wine fed with ViniLiquid is dry! As shown in Figure 1, this decrease in the amount of time necessary for the fermentation is achieved without a dramatic initial increase in kinetics, so it won’t cause unusual temperature spikes or foaming. The more consistent curve at the end of fermentation is a result of ViniLiquid’s efficiency in promoting cellular regrowth and viability when compared to DAP or powdered nutrients.

### Induced Yeast Autolysis

**Springferm**
A natural source of available organic nitrogen, vitamins, and minerals to stimulate alcoholic fermentation.

**Springferm Xtrem**
A very high content of available organic nitrogen, vitamins, and minerals for extreme fermentation conditions as well as malolactic fermentation.

### Mineral/Organic Nitrogen Synergy

**Springferm Complete**
A blend of organic and mineral nitrogen, DAP, autolyzed yeasts and a supplement of B1 vitamin.

<table>
<thead>
<tr>
<th>Growth Factors Deficiency</th>
<th>Survival Factors Deficiency</th>
<th>Low Turbidity</th>
<th>Slugfest Fermentation</th>
<th>Restart a Stuck Fermentation</th>
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</thead>
<tbody>
<tr>
<td>Springferm Complete</td>
<td>Springferm Complete</td>
<td>Springcell</td>
<td>Springferm at mid fermentation</td>
<td>Springferm Complete</td>
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<tr>
<td>Springferm + DAP</td>
<td>Springcell</td>
<td>Springcell Color</td>
<td>Springferm Xtrem at mid fermentation</td>
<td>Springferm Xtrem + DAP</td>
</tr>
<tr>
<td>Springferm Xtrem + DAP</td>
<td>Springcell Color</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fermentation Optimization with ViniLiquid

Focusing on fermentative power and ease of use, ATPGroup is proud to introduce Fermentis’ latest development in yeast nutrition, ViniLiquid! ViniLiquid is a highly autolysed liquid yeast preparation combining the benefits of yeast derivatives and pure yeast hulls. The completely solubilized liquid format allows for easy, accurate dosing, immediate and complete integration in the juice/must when gently mixed and no dust or inhalation hazards!

**Packaging:** 1 kg and 12 kg.
Enology Products – Yeast Nutrients

**Fermo-Casein – Fermentation Activator**
A complex fining agent of potassium caseinate, bentonite and Alpha-cellulose fibers.
- The electrostatically charged cellulose fibers improve the action of the bentonite and adsorb the fatty acids produced by the yeast during stressful fermentations.
- Designed to produce wines that are stable from all standpoints: catechins, proteins and polyphenols.
- Adsorbs the oxidizable polyphenols.
- Stabilizes the proteins in the must.
**Application:** To be added to the tank once fermentation has started.
**Packaging:** 20 kg bag.
**Recommended Dosage:** 1 – 4 lb/1,000 gal.

**Fermo-Clean – Complete Yeast Nutrient**
This complex yeast nutrient’s Alphacellulose fibers detoxify or “Clean” the must through the adsorption of medium chain length fatty acids (C6-CB-C10) produced during fermentation.
- Fibers also help provide a support matrix for the yeast, especially critical in highly-clarified juice, such as those processed by centrifuge or where mold/rot conditions existed on incoming fruit.
- Contains many of the necessary nutritional needs of the yeast.
- The alpha cellulose fibers also act as a physical support for the yeast while providing for better dispersion throughout the mass, which is especially important in clarified musts.
**Application:** Fermo-Clean can be used 24 hours after fermentation has started and if required again at mid-fermentation.
**Packaging:** 25 kg bag.
**Recommended Dosage:** 1 – 3 lb/1,000 gal depending on YAN.

**Fermo-Start**
Designed to assist the rapid activation of the yeast by allowing the yeast to accumulate amino acids.
- The presence of growth factors assures a quick start, without causing an excessive increase in the maximum rate of fermentation and a growing demand for nutritional requirements.
- Based on inactive yeast, yeast cell walls, thiamine hydrochloride and amino acids.
- TTB Limit 2.5 lb/1,000 gal.
**Application:** To be used as a rehydration product or 24 hours after the fermentation has started.
**Packaging:** 15 kg bag.
**Recommended Dosage:** 1 – 2.5 lb/1,000 gal depending on YAN.

**Thiamine Hydrochloride**
Yeast cells grow significantly faster as the result of enhanced utilization of mineral nitrogen in the presence of external sources of Thiamine (Vitamin B1).
- Particularly beneficial when trying to restart a sluggish or stuck fermentation.
- A member of the vitamin B1 complex group.
- It is the hydrochloride salt form of thiamine which is water soluble.
- Other names: Vitamin B1 Hydrochloride
**Application:** Thiamine hydrochloride can be used 24 hours after the fermentation has started and if required again at mid-fermentation or later stages of fermentation.
**Packaging:** 20 kg carton. Available by special order only.

**Notes**
Enology Products – Malolactic

**Malo-Plus**
A single strain Oenococcus oeni specifically selected for its tolerance towards low temperatures, sulfur dioxide and high alcohol content (15% v/v) giving this strain superior fermentation capabilities.
* Results in a highly active culture which is ready for and quick inoculation.
* Suitable for both red and white wines.
* Since wine is a hostile environment the freeze dried powder was developed to prepare the Oenococcus oeni cell membrane for this environment.

**Application:** Can be added towards the end of primary fermentation or after wine has completed primary fermentation.
**Packaging:** 1,000 gal, 10,000 gal, 50,000 gal and 100,000 gal.
Some sizes special order only.

**Malo-Plus HA**
Single strain Oenococcus oeni specifically selected for its tolerance towards high acidity content and fermentation speed.
* Suitable for both red and white wines.
* Strong fermenter even at higher alcohol levels (14% v/v) and pH tolerant to 3.1.
* Since wine is a hostile environment the freeze dried powder was developed to prepare the Oenococcus oeni cell membrane for this environment.

**Application:** Can be added towards the end of primary fermentation or after wine has completed primary fermentation.
**Packaging:** 1,000 gal, 10,000 gal and 50,000 gal.
Some sizes special order only.

**Malo-D**
This diacetyl producing bacteria is designed to contribute complexity to wine aromas as well as softness and richness to the palate.
* Malo-D is a single strain Oenococcus oeni specifically selected for its diacetyl production.
* Well suited for structured white wines, but can also be used for Sparkling and Red wine styles.

**Application:** Can be added towards the end of primary fermentation or after wine has completed primary fermentation.
**Packaging:** 1,000 gal, 10,000 gal, 50,000 gal and 100,000 gal.
Some sizes special order only.

**Malo-Detox**
Reduces by absorption toxins that are naturally present in the wine at the end of primary fermentation. It uses ensures a fast and replicable solution to protect malolactic fermentation.
* Reducing or eliminating potentially toxic compounds.
* Reduce the population of other microorganisms.

**Application:** Particularly indicated for wines that are considered at risk to complete malolactic fermentation.
**Packaging:** 1 kg bag.
**Recommended Dosage:** 1.6 – 2.5 lb/1,000 gals.

**Malo-Multi**
The benefit of this multi strain bacteria is its ability to highlight the typical aromas of the variety from which it is produced while enhancing complexity.
* In white varieties, it will enhance varietal typicality.
* In red varietals it will enhance dark berry characters.
* Malo-Multi is a mixed strain Oenococcus oeni consisting of three genetically different strains.
* It is a strong fermenter even at high alcohol levels (15% v/v).

**Application:** Can be added towards the end of primary fermentation or after wine has completed primary fermentation.
**Packaging:** 1,000 gal, 10,000 gal and 50,000 gal.
Some sizes special order only.

**Malo-Nutribact**
A yeast extract derived from selected strain of Saccharomyces Cerevisiae particularly suitable for the nutrition and multiplication of bacteria strains (Oenococcus Oeni). The R&D Division of ATPGroup developed this nutrient with the specific goal of ensuring a fast start and completion of malolactic fermentation in particular on wines where limiting factors can affect malolactic. Malo Nutribact is rich in complex polysaccharides and micro elements able to improve bacteria multiplication and resistance with the ultimate goal of ensuring fast and complete malolactic fermentation.
* Protect bacteria cell.
* Stimulate multiplication.
* Improve cell strength.
* Speed up completion of malolactic fermentation.

**Application:** Both red and white wines. To be used at beginning of malolactic fermentation.
**Packaging:** 1 kg.
**Recommended Dosage:** 0.8 – 2.1 lb/1,000 gals.
**Enology Products – Yeast-derived Products**

**Springarom**
Inactivated yeast product providing precursors for Glutathione, a strong natural antioxidant that reduces loss of aromas and changes to color resulting from normal oxidation due to aging.
- A fermentation activator based on inactivated yeast possessing important reduction strength due to its natural 3% Glutathione equivalent content.
- Antioxidant tripeptide contained in yeast that prevents free radicals apparition and avoids organoleptic aging.
**Application:** To be added 24 hours after the beginning of fermentation with Sauvignon Blanc, Gewurztraminer, Chenin Blanc, Colombard, Riesling and Rosé styles.
**Packaging:** 1 kg packet.
**Recommended Dosage:** 1.5 – 2.5 lb/1,000 gal.

**Springcell Color**
High in polysaccharides, Springcell Color was specifically developed to act on the intensity and the stability of color as well as on the roundness of red wines with long term benefits.
- Contains twice the amount of polysaccharides when compared to basic inactivated yeast.
- Perfectly adapts to tannic grape cultivars by reducing astringency due to the coating action of the polysaccharides on the green tannins.
- Supplies both organic nitrogen and survival factors, which are assimilated by the yeast to assist in fermentation.
**Application:** To be incorporated 24 hours after the beginning of fermentation.
**Packaging:** 500 gram packet and 10 kg box.
**Recommended Dosage:** 1.5 – 2.5 lb/1,000 gal.

**Springcell Manno**
Springcell Manno is a 100% yeast polysaccharide product giving roundness and mouth-feel directly to the wine.
- Recommended for barrel-matured wines in addition to or as a replacement for lees.
- A special yeast cell wall preparation which is easily degradable.
- Supplies polysaccharides, the noblest part of the lees, directly to the wine.
- Recommended for barrel matured wines in addition or replacement of lees.
- Polysaccharides combine themselves with the most astringent tannins to attenuate the hardness and bring roundness to the wine.
**Application:** Can be added during primary fermentation. Or at the beginning of fermentation to light wines with poor structure, red wines from tannic and deeply colored cultivars, or any wine in to addition to the original lees.
**Packaging:** 500 gram packet.
**Recommended Dosage:** 1.5 – 2.5 lb/1,000 gal.

**Enology Products – Oak Alternatives**

**Oak Chips – Heinrich Oak Alternatives**
Our chips are toasted in a distinct manner resulting in a chip with forthright flavors and excellent tannins that provide body to the finished wine.
- Available in American Oak, French Oak and Maximum Impact.
- A variety of toast levels including: Untoasted, Medium or Maximum Impact.
- Large size chips: 1.25 mm.
- Small batch roasting process yields a precise and consistent toast level.
- Provided in 10 kg mesh infusion bags for easy of use. These are sealed inside the outer packaging.
**Packaging:** 10 kg bag.

**Oak Powder – Heinrich Oak Alternatives**
Oak Powders are ideally suited to be added at the crusher prior to primary fermentation. Our Heinrich Oak Powder added in light doses during fermentation provides structure to the finished wine.
- Heavier doses during fermentation provides toastiness and masks greenness.
- Available in French and American Oak.
- Offered in two toast levels: our unique “Heinrich House Toast” as well as Untoasted.
- The small batch roasting process yields a precise and consistent toast level.
**Packaging:** 10 kg bag.

**Oak Shavings – Heinrich Oak Alternatives**
Our unique toast profiles result in shavings which provide structure, “toastiness” and vanilla.
- Chips can be added directly to the crusher or at the first pump over.
- Available in American Oak.
- A special blend toasted to our unique “Heinrich House Toast”.
- A blend of sizes made for fermentation.
- Small batch roasting process which yields a precise and consistent toast level.
- Double bagged in 10 kg bags to preserve freshness.
**Packaging:** 10 kg bag.

**Oak Staves – Heinrich Oak Alternatives**
Our Oak Staves are available individually and create a “barrel like” oak profile in stainless steel tanks. Your ATPGroup representative can work closely with your winemaker to create your oak profile of choice.
- Available in both American and French oak with a convection toast, as well as American Oak with a Maximum Impact toast.
- Staves can be used during fermentation, aging and finishing stages of wine production. Primarily they are used during aging with a recommended contact time of 3 – 6 months. Staves make the ideal companion to micro-oxygenation.
**Packaging:** 16 individual staves.
Cellar Supplies
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**Cellar Supplies – Chemicals**

**Ascorbic Acid**
Ascorbic Acid, a powerful anti-oxidant. It can be added to a wine at bottling to help protect color from oxidizing and reduce the chances of browning and spoilage. Ascorbic Acid prevents oxidation by consuming any free oxygen that may still be present in a wine at bottling time. Its effects are stronger and longer lasting when used in combination with Potassium Metabisulfite. Results will mean a fresher wine with higher-intensity fruit characteristics.

- **Used to prevent oxidation.**
- **Must be used with caution and can react with oxygen to produce hydrogen peroxide.**
- **To be used with adequate free SO₂ present so that any free H₂O₂ is removed.**
- **Other names:** L-Ascorbic Acid; Vitamin C.

**Application:** At any stage during the winemaking process, especially prior to bottling.

**Packaging:** 25 kg carton.

**Bentonite KWK Krystal Klear**
Bentonite KWK Krystal Klear, also known as Volclay KWK Food Grade.

- **Other names:** Volclay KWK Food Grade.

**Application:** At any stage during the winemaking process.

**Packaging:** 50 lb bag.

**Recommended Trial Rates**
Prepare a 6% Bentonite Solution to perform trials.

<table>
<thead>
<tr>
<th>Wine Sample (mls)</th>
<th>mls 6% Sol.</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>0.4</td>
<td>1#/K</td>
</tr>
<tr>
<td>200</td>
<td>0.8</td>
<td>2#/K</td>
</tr>
<tr>
<td>200</td>
<td>1.2</td>
<td>3#/K</td>
</tr>
<tr>
<td>200</td>
<td>1.6</td>
<td>4#/K</td>
</tr>
<tr>
<td>200</td>
<td>2</td>
<td>5#/K</td>
</tr>
<tr>
<td>200</td>
<td>2.4</td>
<td>6#/K</td>
</tr>
<tr>
<td>200</td>
<td>2.8</td>
<td>7#/K</td>
</tr>
</tbody>
</table>

**General Hints**

When vigorously mixed so that every particle is wetted, Bentonite nearly attains its full hydration within 10 minutes.

Always add Bentonite to water — not water to Bentonite.

Always add the Bentonite to water slowly.
Bio-Cool Inhibited Propanediol
Bio-Cool Inhibited Propanediol is a high-performing, food-safe alternative to conventional glycols for low-temperature heat-transfer applications in the wine, beer and food industries. Bio-Cool has earned USDA BioPreferred® designation and is the next generation of renewable heat transfer fluid solutions. Made from renewable sourced materials, Bio-Cool Inhibited Propanediol has the performance benefits of improved viscosity at lower temperatures and improved freezing-point depression versus propylene glycol. This results in lower energy cost and wear and tear on equipment.
- From renewable plant-based source, green technology.
- Save 10% – 12% on energy costs over traditional propylene glycol.
- Reduces wear and tear on cooling equipment.
Application: For use low-temperature heat-transfer applications in chillers, to replace or used with propylene glycol.
Packaging: 55 gal drum.
Recommended Dosage: There is none, just add it to your system and go, much like adding oil in your car.

Carbon Activated
Activated carbon can be used in wine and juice, at any stage during the winemaking process, to remove off aromas and off flavors as well as problems with color such as excessive browning or pinkness.
- Regarded as a severe and relatively non-specific fining agent and should be added only after conducting a bench trial.
- Other names: Activated Charcoal.
Application: Can be added at any stage during winemaking process.
Packaging: (Deodorizing) 44 lb bag and (Decolorizing) 40 lb bag.

Citric Acid
Citric Acid can be used for acidification in wines that are naturally lacking in acid. Wines that are too low in acid are flat tasting. Citric acid adds liveliness to the wine and helps to bring out a fresher, fruity citrus note on the palate. ATPGroup carries both domestic and imported Citric.
- It should always be added to finished wines and never to underfermented grape juice because it can be converted into acetic acid by the action of yeast, resulting in a wine with excess volatile acidity.
- Neutralizes with an acid rinse. (3% w/w Citric Acid solution).
- Other names: 2-hydroxy-1,2,3-propanetricarboxylic acid.
Application: Usually added prior to bottling.
Packaging: 25 kg (Domestic) and 50 lb bag (Imported).

Cream of Tartar
ATPGroup is the only domestic producer of Cream of Tartar — white crystals or powder — derived from wine lees. Cream of Tartar is used to aid in cold stabilization of wine by dosing with high rates of KHT crystals to force precipitation.
- Other names: Potassium Bitartrate; Potassium Acid Tartrate, KHT.
Application: Usually added prior to bottling.
Packaging: 25 kg bag.

Diammonium Phosphate – DAP
Diammonium Phosphate (DAP) is a mineral nitrogen source used for yeast viability during primary fermentation. DAP stimulates yeast growth and fermentation activity and helps to prevent the formation of hydrogen sulfide. Add it to juice or must to supplement natural levels of yeast assimilable nitrogen (YAN) at the beginning of fermentation.
- Other names: Potassium Bitartrate; Diammonium Hydrogen Phosphate; Diammonium Phosphate.
Application: Usually added at the beginning of fermentation and possibly again at the mid-point.
Packaging: 500 gram packet and 5 lb bag.

Ovo-Pure / Egg Albumin
Ovo-Pure is a spray-dried egg albumin obtained from fresh eggs. A special atomization process produces a very pure dry powder and is used for clarifying wine, especially for the clarification of red wines in order to remove the haze caused by excessive tannins.
- Ovo-Pure is especially recommended for applications where gelatin or casein is too aggressive.
- Designed to combine with polyphenols and unstable anthocyanins eliminating astringent tannins and the oxidizable color matter which could precipitate in the bottle.
- Other names: Ovo-Pure.
Application: Add at any stage of the winemaking process to reduce astringency.
Packaging: 500 gram packet and 25 kg bag.
Potassium Carbonate

Used for the deacidification of juice or wine. Potassium Carbonate can be added at any stage of the winemaking process, but most commonly used for raising the pH and lowering the TA of the juice prior to fermentation. The result can be a more efficient fermentation and can improve acid balance in the resultant wine.

- Treating the juice has the least detrimental effect on the sensory characteristics of the wine.
- Other names: Polyvinyl/poly-pyrrolidone, Polyclar VT.

Application: Can be added at any stage during the winemaking process, especially prior to bottling.

Packaging: 25 kg carton.

PVPP-VT – Polyclar VT

Polyclay PVPP-VT is 100% PVPP with an average particle size of around 110 microns designed for addition to vessels where faster settling is required.

- Primary function is to remove phenolic compounds from white wines.
- Other names: Polyvinyl/poly-pyrrolidone, Polyclar VT.

Application: To be added at any stage of the winemaking process.

Packaging: 50 lb drum.

Potassium Benzoate

Generally used with sweet wines and sparkling wines, but may be added to table wines which exhibit difficulty in maintaining clarity after fining. Can be added at any stage but usually when active fermentation has ceased and the wine is racked for the final time after settling.

- Potassium Benzoate is a white crystal or granular and is soluble in water and wine.
- Can be used as an alternative to Sodium Benzoate.

Application: Added at any stage of the winemaking process but usually immediately prior to bottling.

Packaging: 50 lb bag.

Potassium Carbonate

Used for the deacidification of juice or wine. Potassium Carbonate can be added at any stage of the winemaking process, but most commonly used for raising the pH and lowering the TA of the juice prior to fermentation. The result can be a more efficient fermentation and can improve acid balance in the resultant wine.

- Treating the juice has the least detrimental effect on the sensory characteristics of the wine.
- Other names: Potash; Pearl Ash.

Application: Added at any stage of the winemaking process but usually immediately prior to bottling.

Packaging: 25 kg and 50 lb bag.

Potassium Chloride

An alternative to Sodium Chloride to be used in water softening units.

Application: Water Treatment units.

Packaging: 40 lb bag.

Fumaric Acid

Widely found in nature, Fumaric Acid is the strongest organic food acid and will produce similar effects as Tartaric or Citric Acids at lower addition rates. Presence in a lower pH environment will yield a persistent, long lasting crispness.

Application: Can be added at any stage of the winemaking process.

Packaging: 25 kg bag.

PVPP-V – Polyclar V

Polyclay PVPP-V is a highly effective 100% PVPP wine stabilizer with an average particle size of 25 microns. It’s optimized for maximum, fast-acting reduction of polyphenols, such as the leucoanthocya-ndins and catechins that may cause “pinking” and “browning” through oxidative polymerization.

- Other names: Polyvinyl/poly-pyrrolidone, Polyclar V.

Application: To be added at any stage of the winemaking process.

Packaging: 44 lb drum.
From a winemaking perspective, Tartaric Acid levels play a vital role in making wine. It inhibits reactions associated with oxidation/microbial spoilage. It increases color intensity and hue, improves flavor profile, and enhances aging potential. ATPGroup is a world leader in providing the highest-quality Tartaric Acid to the food and beverage industries.

- **100% derived from grapes.**
- **Unique to grapes, it is the main acid found in most finished wines.**
- **Reduces the pH and increases titratable acidity.**
- **Low pH conditions — increases the sulfur dioxide effectiveness.**

**Application:** Can be added at any stage of the winemaking process.

**Packaging:** 1 kg (Seasonal) and 25 kg bag.

**Sorbic Acid**

Sorbic Acid is often used in sweet wines as a preservative against fungi, bacteria and yeast growth.

- **The antimicrobial action of Sorbic Acid is used primarily against yeasts and molds.**
- **Must and wine related yeasts inhibited by Sorbic Acid include species of genera Brettanomyces, Candida, Hansenula, Pichia, Saccharomyces, Torulaspora and Zygosaccharomyces.**

**Other name:** 2,4-hexadienoic acid.

**Application:** At any stage during the winemaking process, especially prior to bottling.

**Packaging:** 25 kg bag.

**Sodium Chloride**

Sodium chloride is often used to reduce the concentration of calcium, magnesium and other ions in hard water. The “hardness ions” can cause a variety of undesired effects like the buildup of scale, which can foul lines and pumps in wineries as well as interfere with the cleaning action of basic winery cleaners.

- **Other names:** Salt; NaCl.

**Application:** For use in water softening units.

**Packaging:** 50 lb bag.

**Potassium Metabisulfite**

Potassium Metabisulfite is used in must or wine to prevent oxidation and/or spoilage. It can be used both in a powder or liquid form to sprinkle over grapes prior to crushing.

- **Its action in water inhibits harmful bacteria through release of sulfur dioxide.**
- **It can also be used as an antiseptic agent to sanitize tanks, lines and pipes.**
- **Note:** Its strength is about 17% greater than Sodium Metabisulfite and should be mixed accordingly.

**Application:** Can be added at any stage of the winemaking process.

**Packaging:** 1 kg (Seasonal) and 25 kg bag.

**Potassium Sorbate**

Potassium Sorbate arrests fermentation and is used as an additive before bottling to prevent re-fermentation in the bottle. It does not kill yeast and therefore is not a fungicide, but prevents fermentation by interfering with the metabolism of the yeast.

- **Its properties are dependent on the combined presence of sulfur dioxide, alcohol, and acidity.**
- **Other names:** Potassium-2, 4-hexadienolate.

**Application:** Should be added just prior to bottling.

**Packaging:** 50 lb box.

**Propylene Glycol – Inhibited**

Inhibited Propylene Glycol is an inhibited industrial coolant and heat transfer agent. It is free of suspended solids and is colorless and odorless. The inhibitor system is designed to protect brass, copper, solder, steel, cast iron, aluminum, and other metals commonly found in industrial cooling and heating systems.

- **Typical application is in solution with water to produce a coolant for refrigeration units for heat transfer fluids.**
- **96.0% Propylene Glycol.**
- **Other names:** Propane-1,2-diol; 1,2-Propanediol.

**Application:** Consult ATPGroup sales representative for recommended dilution rates.

**Packaging:** 55 gal drum.

**Tartaric Acid USP / FCC**

From a winemaking perspective, Tartaric Acid levels play a vital role in making wine. It inhibits reactions associated with oxidation/microbial spoilage. It increases color intensity and hue, improves flavor profile, and it enhances aging potential. ATPGroup is a world leader in providing the highest-quality Tartaric Acid to the food and beverage industries.

- **100% derived from grapes.**
- **Unique to grapes, it is the main acid found in most finished wines.**
- **Reduces the pH and increases titratable acidity.**
- **Low pH conditions — increases the sulfur dioxide effectiveness.**
- **Other name:** Dihydroxyxuccinic acid.

**Application:** Can be added at any stage of the winemaking process.

**Packaging:** 25 kg bag and 1,000 kg super-sack.
Cellar Supplies – Filtration Aids

Diatomaceous Earth (DE)
Diatomaceous earth (DE), Celatom, by EP Minerals, is a filtration media composed of microscopic diatoms silica structures millions of years old. DE is used in the beer and wine industries as an extremely effective economical filtration media to facilitate liquid-solid separating. DE’s uniquely strong cylindrical geometry shape and its high-pore volume and low resistance to flow, make it the go-to filter medium.

- Diatomite has been used as a filter aid for nearly a century.
- The ore is a soft, friable siliceous mineral composed of the skeletal remains of micro-scopic plants deposited on the bottoms of oceans and lakes during the Miocene Age.
- Diatomaceous earth is amorphous silica with varying particle shapes and has the ability to form highly permeable, but rigid and incompressible filter cakes, which translates into efficient and economical filtrations.

**Application:** Two-step operation; first added as a protective layer (pre-coat), and then to maintain porosity (body-feed in pressure filters).

**Other name:** DE.

**Package:** 50 lb bag and 1,000 kg super sack.

Perlite
Perlite is a lightweight expanded bubble structure derived from volcanic glass that’s milled and classified into powders that are used in both pressure and vacuum filtration equipment. Perlite filter aids are inert and will impart no taste or odor into wine, and are virtually insoluble in mineral and organic acids at all temperatures.

- Perlite is the generic name for a naturally occurring siliceous volcanic rock.
- Perlite is an amorphous material, without crystalloite particles, i.e. does not require a carcinogenic label.
- Designed for use in any diatomite or powder type filtration system, i.e. both pressure and vacuum filtration equipment.
- Particularly well suited for vacuum systems since it is resistant to pre-coat cracking.
- Results in Low Soluble Metal in the finished juice/wine.
- Various grades are available — speak with your ATPGroup sales representative about your particular application.

**Application:** Usually added as a filtration aid during filtration or as a pre-coat at the start of the filtration cycle.

**Packaging:** 25 – 35 lb bag depending on grade.

Fiber Floc Vac
Fiber Floc Vac is a specially-formulated inert filter-aid containing highly purified alpha cellulose and cotton fibers in addition to perlite. The primary function of this product is for the initial precoat layer on a screen filter including rotary drum and pressure leaf filter. Fiber Floc helps extend the life of your screens, improves clarity with less bleed through, and improves filter cake stability.

**Application:** Usually added as a filtration aid during filtration or as a pre-coat at the start of the filtration cycle.

**Packaging:** 35 lb bag.

Cellar Supplies – Filtration Aids

Fiber Floc 10 and 30
Chemically inert complex filter aids which are used in the formation of pre-coats for continuous dosing filtrations. Fiber Floc is specifically formulated to contain highly-purified alpha cellulose and cotton fibers in addition to perlite.

- Fiber Floc 10 is recommended for primary filtration
- Fiber Floc 30 is recommended for polish filtration.

**Application:** Usually added as the initial pre-coat then followed by either DE or Perlite.

**Packaging:** 35 lb bag.

BECO Depth Filter Sheets
BECO depth filter sheet is the industry leader in pad filtration. The BECO sheet was developed to meet extreme quality and performance demands in the beer, wine and pharmaceutical industries. The product range covers retention grades between 5.0 and .01 microns. We carry 13 individual sheet grades that can provide a specific sheet to meet all filtration applications. Finely fibrillated charged cellulose fibers form the matrix of the BECO Filter Sheet.

- Ideal pore structure for reliable retention of the solids to be separated.
- Highest quality raw materials guarantee high clarification performance.
- Economic life of sheets through high solids holding capacity.
- High microbiological retention rates due to the defined pore matrix.

**Packaging:** Consult ATPGroup sales representative for more information.

BECOPAD
BECOPAD is a new, mineral-free (no DE or Perlite) depth filtration system for a wide range of applications, including coarse and sterile filtration. BECOPADS are characterized by their unparalleled purity when compared with conventional filter sheets. With very low, extractable ions, the pads won’t impart any undesirable taste to your product.

- Mineral free.
- 20% greater through-puts.
- Flushing volume reduced by 50%.
- Drip losses reduced by 95%.
- Extremely high LRV retention values.
- Biodegradable.
- Reusable.
- Pads available in all sizes.
- Higher wet strength than conventional sheets.

**Packaging:** BECOPADS can be selected according to the required filtrate quality. Consult ATPGroup sales representative for more information.
**Cellar Supplies – Filtration Aids**

**BECO Depth Filter Sheets**
BECO depth filter sheets were developed to meet demanding liquid filtration requirements. The product range covers retention grades between 5.0 and 0.1 microns. With 13 individual sheet grades we can provide a specific sheet to meet all filtration applications. Finely fibrillated charged cellulose fibers form the matrix of the BECO filter sheet.

**Specific advantages of the BECO Filter Sheets:**
- Ideal pore structure for reliable retention of the solids to be separated.
- Highest quality raw materials guarantee high clarification performance.
- Economic life of sheets through high solids holding capacity.
- High microbiological retention rates due to the defined pore matrix.

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**BECOPAD**
BECOPAD is a new mineral free (no d.e. or perlite) depth filtration media containing only purified cellulose fiber. BECOPADs are characterized by their unparalleled purity when compared with conventional filter sheets. With very low extractable ions, the pads will not impart any undesirable taste in your product.

**BECOPAD Advantages:**
- Mineral free.
- 20% greater throughputs.
- Flushing volume reduced by 50%.
- Drip losses reduced by 99%.
- Extremely high LRV retention values.
- Biodegradable.
- Pads available in all sizes.
- Higher wet strength than conventional sheets.
**Cellar Supplies – Cleaning and Sanitation**

### Acid Blend 0112
Low foam liquid cleaning blend of phosphoric and nitric acid that removes scales and passivates stainless steel surfaces quickly.
- Excellent cleaning results at low use concentrations.
- Approved for use by major equipment manufacturers.
- Non-Chlorinated liquid tank and line cleaning product.
- Membrane cleaning product for cross-flow membrane CIP

**Application:** Observe the recommendations of the membrane manufacturer for maximum temperature, pH limits and time limits.

**Packaging:** 55 gal drum and mini-bulk.

### Acid Sanitizer LF
Low foam acid sanitizer for interior and pipe sanitizing.
- Safer alternative to PAA.
- No rinse required after treatment.

**Application:** Contact ATPGroup sales representative for specific application instructions.

**Packaging:** 55 gal drum.

### HD Winery Circulation Cleaner
Low foam sodium hydroxide liquid cleaner for interior tank cleaning and CIP applications.
- Fully built cleaner with more effective results than plain caustic.
- Rinses faster which saves water.
- Approved for use by major equipment manufacturers.

**Applications:** Consult ATPGroup sales representative for specific application instructions.

**Packaging:** 55 gal drum and mini-bulk.

### Caustic Soda Beads
A general-purpose industrial chemical that in a solid form is suitable for making into a solution for the removal of stubborn tartrates in stainless steel tanks and equipment.
- Neutralizes with an acidic rinse (3% w/w Citric acid solution).
- Other name: Sodium Hydroxide, NaOH.

**Application:** Contact ATPGroup sales representative for more information.

**Packaging:** 25 kg bag.

**Cellar Supplies – Cleaning and Sanitation**

### Foaming Acid Red
Self-foaming liquid blend of phosphoric and citric acids for cleaning stainless steel surfaces.
- Removes hard water stains.
- Leaves stainless steel surfaces bright and shiny.

**Application:** Consult ATPGroup sales representative for specific application instructions.

**Packaging:** 55 gal drum.

### Foamy
Economical liquid foam additive that turns any cleaner into a self-foaming cleaner.

**Application:** Consult ATPGroup sales representative for more information.

**Packaging:** 5 gal and 55 gal drum.

### HD550 KOH Liquid Potassium Cleaner
Low foam potassium hydroxide liquid cleaner for interior tank cleaning and CIP applications.
- Fully built cleaner, that provides more effective results than plain caustic or KOH alone.
- Very low sodium, rinses faster which saves water.
- Approved for use by major equipment manufacturers.

**Applications:** Consult ATPGroup sales representative for specific application instructions.

**Packaging:** 55 gal drum and mini-bulk.

### Calcium Hypochlorite
Widely used for water treatment and as a bleaching agent.
- Possesses ability to remove mold.

**Application:** Contact ATPGroup sales representative for more information.

**Packaging:** 100 lb pail.
Cellar Supplies – Cleaning and Sanitation

**Liquid Cleaner**
General-purpose liquid cleaner and degreaser.
- For equipment, facility and floor cleaning.
- May be used in a wide variety of applications.
- Soft metal safe.
*Applications:* Consult ATPGroup sales representative for specific application instructions.
*Packaging:* 55 gal drum.

**LP Acid**
Low foam blend of nitric and phosphoric acids that removes scales and passivates stainless steel.
- Excellent results at low use concentrations.
- Specifically designed to passivate new stainless steel surfaces quickly.
*Application:* Contact ATPGroup sales representative for more information.
*Packaging:* 55 gal drum.

**NC Foam Cleaner**
Self foaming potassium hydroxide liquid cleaner that is ideal for vertical surfaces.
- Very low sodium content.
- Does not contain chlorine.
- Excellent for cleaning of exterior tank surfaces and cellar equipment.
- Foam cleaning provides extended contact time.
*Applications:* Consult ATPGroup sales representative for specific application instructions.
*Packaging:* 55 gal drum.

**Peracetic Acid**
Peracetic Acid is an ideal antimicrobial agent due to its high oxidizing potential.
- Environmentally friendly organic compound that does not contribute to or COD.
- Very effective cold sanitizer and effective at low use concentration.
- Used for pipeline cleaning, sanitizing and disinfecting or as a cooling tower water disinfectant preventing biofilm formation.
- Other names: PAA, Peroxyacetic Acid.
*Application:* Consult ATPGroup sales representative for specific application instructions.
*Packaging:* 5 gal and 55 gal drum.

**Powdered Caustic Cleaner – HD Plus**
Low foam sodium hydroxide and sodium Percarbonate dry cleaner for interior tank cleaning and CIP applications.
- Includes non-chlorine bleach ingredient for excellent stain removal.
- Rinses faster which saves water.
- Fully built cleaner, with more effective results than plain dry caustic.
*Application:* Consult ATPGroup sales representative for more information.
*Packaging:* 50 lb and 350 lb containers.

**Quat DS**
Blend of quaternary ammonium compounds for hard surface sanitizing.
- Excellent mold control for hard surfaces.
- No rinse required after treatment.
*Application:* Consult ATPGroup sales representative for specific application instructions.
*Packaging:* 55 gal drum.

**Soda Ash**
Soda Ash is a sodium salt of carbonic acid and is well known as a water softener.
- In the wine industry, Soda Ash is used as a light cleaning agent.
- Designed for a wide range of cleaning purposes.
- A relatively strong base which is soluble in water.
- Other names: Sodium Carbonate; Calcined Soda.
*Application:* Consult ATPGroup sales representative for more information.
*Packaging:* 50 lb bag.

**Sodium Percarbonate**
Sodium Percarbonate is a white odorless, crystalline powder which when added to water releases hydrogen peroxide, a powerful disinfectant.
- Natural choice for use on barrels, presses, lines and pipes, tanks and other winery equipment.
- Approved for use around food.
*Application:* Consult ATPGroup sales representative for specific application instructions.
*Packaging:* 25 kg and 50 lb bag.
**Super-K CIP**

Low foam potassium hydroxide dry cleaner for interior tank cleaning and CIP applications.
- Low sodium content.
- Rinses fast which saves water.
- Safe on soft metals when used as directed.
- Fully built cleaner with more effective results than plain dry caustic or KOH.

**Application:** Consult ATPGroup sales representative for more information.

**Packaging:** 50 lb & 350 lb drums.

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**Tri-Sodium Phosphate**

Tri-Sodium Phosphate is a cleaning agent, stain remover and degreaser.
- Derived from mixing phosphoric acid and soda ash to form disodium phosphate, then adding caustic soda.
- Highly soluble in water producing an alkaline solution.
- The pH of a 1% solution is between pH 11.8 – 12.0.
- The versatility of this product coupled with the lack of toxicity make TSP a preferred cleaning agent for a wide range of cleaning purposes.
- Other name: Sodium Phosphate Tribasic.

**Application:** Consult ATPGroup sales representative for more information.

**Packaging:** 25 kg bag.

---

**Vinosan Oxy**

Low foam non-caustic cleaner with sodium percarbonate for interior tank cleaning and CIP applications.
- Includes non-chlorine bleach ingredient for excellent stain removal.
- Very low sodium content.
- Rinses faster which saves water.
- Safer to use than traditional caustic cleaners.

**Application:** Consult ATPGroup sales representative for more information.

**Packaging:** 50 lb and 350 lb containers.
ATPGroup carries a broad portfolio of products that can assist winemakers in making exceptional wine.

However, that’s only part of the service that ATPGroup offers wineries. In addition to our wide range of cellar supplies, enology products and equipment, we also provide a team of industry veterans who truly understand the many hurdles faced by winemakers in today’s challenging environment.

Whatever the wine, the winemakers we have, on staff, adopt a hands-on approach, working with our customers and offering advice in the following areas:

- Yeast strain selection
- Fermentation management
- Setting up and interpreting fining trials
- Tannin trials
- Blending and pre-bottling adjustments
- Treatment options
- Micro-oxygenation trials
- Or just ask us for an opinion
Rehydration of Yeast

The steps below are a general outline for rehydrating yeast but the manufacturer’s recommendations and protocols should always be followed.

1. Determine/estimate the total volume of juice/must to be inoculated.
2. Determine the volume of yeast required for the volume to be inoculated. The rate of inoculation is usually provided by the manufacturer specific to every yeast strain. As a guideline the recommended rate is usually 2 lbs/1,000 gallons.
3. Measure a volume of water, equivalent to 10 times the required weight of yeast, into a vessel of a suitable size. It is preferable that the water used is rain or main water rather than distilled water that is free of chlorine and softened.
4. Warm the water to between 86°F– 95°F. It is important that the water remains within this temperature range until the yeast is added. This is one of the critical steps for the yeast rehydration process.
5. Slowly sprinkle the yeast onto the surface of the water. Very gently disturbing the surface of the water aids in wetting of the yeast and prevents the formation of ‘dry’ yeast clumps. However any significant level of stirring at this stage is likely to injure the yeast cells undergoing rehydration and reduce viability. Do not disturb the yeast/water suspension for 15 to 20 minutes. This time allows the yeast to fully rehydrate. After this time, gently stir the yeast/water suspension.
6. Cool the yeast suspension to within 10°F of the temperature of the juice/must to be inoculated. This is achieved by incrementally adding small volumes of juice until the desired temperature is reached. This helps acclimatize the yeast to the temperature in the tank and helps to eliminate temperature shock to the yeast.
7. The yeast suspension should be added with mixing to the tank immediately after preparation.

Winemaking Services – Reference Guides

Nutrient Dose Instructions

Dose calculation instructions:
Minimum YAN needed = 250 mg/L.
YAN adjustments are made with DAP in order to supply at least (250 – initial YAN) mg/L of YAN.
To calculate the total dose of DAP to be added, see the correspondence table DAP/YAN or do the following calculation: (250 – initial YAN) * 0.0395 lbs/1,000 gal.
If the potential alcohol (PA) is > 14% v/v (>24.1° Brix), add 0.5 lbs/1,000 gal of each nutrient to the previously calculated doses except Springarom.

Example:
PA = 12% v/v (20.7° Brix), initial YAN = 190 mg/L

Nutrient Addition Program:
Doses of DAP and Springferm to be added 24 hrs after yeast inoculation:
2/3*(250-190)*0.0395 = 1.58 lbs/1,000 gal.
Dose of DAP to be added between one third and the middle of fermentation:
1/3*(250-190)*0.0395 = 0.79 lbs/1,000 gal.

Fermentation Temperature:
Start at 68°F then cool progressively down to 59 – 63°F after 3% v/v alcohol (5° Brix) reached.
Winemaking Services – Reference Guides

Restarting a Stuck Fermentation

Step-by-step recommendation for the treatment of 2,642 gallons of wine at 12% vol. (20.7° Brix) with residual sugars.

Treatment of the stuck wine
Treatments of the wine prior to inoculation of the yeast starter:

Objective: Make the wine exempt of any toxic by products for the new yeast.
- Rack off the wine (with aeration if red wine) from the lees and press immediately if red wine.
- Addition of 0.2 – 0.3 lb/1,000 gal of SO2/or addition of 0.8 lb/1,000 gal of Lysozyme (Vin-Lyso).
- Addition of 3.0 lb/1,000 gal of yeast hulls (Springcell).
- Gentle stirring and wait for 1 – 2 days.
- Rack (or filter if more practical) and cover the wine with carbon dioxide to avoid oxidation and wait for the preparation of the yeast starter.
- Add 1.7 lb/1,000 gal of Springferm + 1.7 lb/1,000 gal of DAP just prior to inoculation of yeast starter.

Preparation of a 26.4 gallon yeast starter
(10% of the final volume)

Rehydration procedure
Follow the instructions on the data sheet, better with pure water at 98°F
- Dosage of BC S103 yeasts:

<table>
<thead>
<tr>
<th>BRIX REMAINING</th>
<th>DOSAGE (lb/1,000 gal)</th>
<th>WEIGHT (lb) for 2642 gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;3</td>
<td>2.5</td>
<td>6.6</td>
</tr>
<tr>
<td>&lt;3</td>
<td>4.2</td>
<td>11.0</td>
</tr>
</tbody>
</table>

- Gentle stirring.
- Wait 20 minutes.

Winemaking Services – Reference Guides

Restarting a Stuck Fermentation

Yeast starter (Constant temperature between 68 – 77°F)
Add to the 8 gallons of the rehydrated yeasts:
- 5.3 gal of stuck wine already treated (but before addition of activator).
- 10.6 gal of non chlorinated water at 77–86°F.
- 22 lb of sugar (or equivalent amount with concentrated grape juice).
- 0.1 lb of Springferm Complete or 0.05 lb Springferm + 0.05 lb DAP.

■ Measure initial °Brix.
■ Wait for 40% of the sugars (or °Brix) to be consumed.

Acclimatizing stages (68 – 77°F)
First step: 132.1 gallons
Add to the 26.4 gallon yeast starter:
- 26.4 gal of the previous solution.
- 68.7 gal of stuck wine.
- 31.7 gal of non chlorinated water at 68–77°F.
- 44 lb of sugar (or equivalent amount with concentrated grape juice).
- 0.6 lb of Springferm Complete or 0.3 lb Springferm + 0.3 lb DAP.

■ Measure initial °Brix.
■ Maintain at 68–77°F.
■ Wait for 40% of the sugars (or °Brix) to be consumed.

Second Step: 264.2 gallons
Add to the previous 132.1 gallons:
- 32.1 gal of treated wine.

■ Measure initial °Brix.
■ Maintain at 68–77°F.
■ Wait 40% of the sugars (or °Brix) to be consumed.

Inoculation of the yeast starter
Inoculate the yeast starter into the already treated stuck wine with a pumping over with aeration (T–68°F).
**Winemaking Services – Reference Guides**

### Malolactic Parameters

(To understand the parameters, it's important to note the general guidelines for the use of Malolactic Bacteria, as per the manufacturer’s recommendations and protocols. Always follow the guidelines provided by the manufacturer)

**Analysis of the juice and wine can aid in identifying potential problems.**

1. The most limiting factor in Malolactic Fermentation (MLF) is often temperature related. The optimal temperature is between 64°F to 72°F (18 to 22°C).
2. Level of Total SO₂ — prior to inoculation for MLF, the total SO₂ level should ideally be below 30 ppm. However, Malo-Plus can tolerate TSO₂ of 45 ppm.
3. pH — preferably in the range of approximately pH 3.1 to pH 3.5.
4. Alcoholic Content — preferably less than 14% v/v, with selected strains like Malo-Plus being able to tolerate alcohol levels up to 16% v/v.

### Addition Volumes for Trials Using a 5% Solution

<table>
<thead>
<tr>
<th>DOSAGE</th>
<th>SAMPLE VOLUME, mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppm</td>
<td>lbs/1,000 gal</td>
</tr>
<tr>
<td>10</td>
<td>0.08 0.05 0.08 0.08 0.10 0.15 0.20</td>
</tr>
<tr>
<td>20</td>
<td>0.17 0.10 0.15 0.16 0.20 0.30 0.40</td>
</tr>
<tr>
<td>30</td>
<td>0.25 0.15 0.23 0.24 0.30 0.45 0.60</td>
</tr>
<tr>
<td>40</td>
<td>0.33 0.20 0.30 0.32 0.40 0.60 0.80</td>
</tr>
<tr>
<td>50</td>
<td>0.42 0.25 0.38 0.40 0.50 0.75 1.00</td>
</tr>
<tr>
<td>60</td>
<td>0.50 0.30 0.45 0.48 0.60 0.90 1.20</td>
</tr>
<tr>
<td>70</td>
<td>0.58 0.35 0.53 0.56 0.70 1.05 1.40</td>
</tr>
<tr>
<td>80</td>
<td>0.67 0.40 0.60 0.64 0.80 1.20 1.60</td>
</tr>
<tr>
<td>90</td>
<td>0.75 0.45 0.68 0.72 0.90 1.35 1.80</td>
</tr>
<tr>
<td>100</td>
<td>0.83 0.50 0.75 0.80 1.00 1.50 2.00</td>
</tr>
<tr>
<td>125</td>
<td>1.04 0.63 0.94 1.00 1.25 1.88 2.50</td>
</tr>
<tr>
<td>150</td>
<td>1.25 0.75 1.13 1.20 1.50 2.25 3.00</td>
</tr>
<tr>
<td>175</td>
<td>1.46 0.88 1.31 1.40 1.75 2.63 3.50</td>
</tr>
<tr>
<td>200</td>
<td>1.67 1.00 1.50 1.60 2.00 3.00 4.00</td>
</tr>
<tr>
<td>300</td>
<td>2.50 1.50 2.25 2.40 3.00 4.50 6.00</td>
</tr>
<tr>
<td>400</td>
<td>3.34 2.00 3.00 3.20 4.00 6.00 8.00</td>
</tr>
</tbody>
</table>

Notes: 5% Solution = 2.5g powdered product dissolved in 50mL distilled water. Some products may not completely dissolve so mixing between additions is recommended. 
(100 ppm = 0.100g/L = 0.834 lbs/1,000 gals.)

Other dosage rates can be calculated using this formula:

\[
\text{Volume of solution in mL} = \frac{(\text{Desired dosage in ppm}) \times (\text{Volume of wine sample in mL})}{(\text{Concentration of solution in ppm})}
\]
Post-Fermentation Tannins – Red Wines

Tannins for use in winemaking after the primary fermentation are generally used for two main purposes; these are to improve structure and texture or to mask green characteristics and improve aromatic complexity. ATP’s range of post-fermentation tannins provides a winemaker’s ultimate “spice rack” for helping define style and maximize quality.

Finishing Tannins
As the name implies, ATP’s Finishing Tannins are intended to put the final touches on wines pre-bottling. Mainly for improving aromatic complexity with vanilla, mocha and sweet oak toast characteristics these tannins can also help round out the palate and enhance the antioxidant capacity of a wine.

Micro-Oxygenation
For applications involving Micro-oxygenation ATP’s Tani-Structure and Tani-Complete are well suited for palate enhancement and green character masking independently or in conjunction with oak chips.

Maturation Tannins
Maturation or Aging tannins are usually comprised of grape derived (Tani-Grape) or blended tannins intended to improve the mouthfeel of a wine with three or more months of aging remaining. These tannins are designed to enhance the overall structure of a wine or to improve texture by rounding out specific ‘holes’ in the palate. Other benefits of using maturation tannins are their effect as antioxidants and their role in protecting color.

(As with all products for use on finished wine we strongly recommend bench trials to determine the effective dose for your desired style. For assistance choosing an appropriate Post Fermentation Tannin please contact your ATPGroup Technical Representative or our Technical Manager.)
Winemaking Services – Reference Guides

Red Wine Aging with Micro-Oxygenation and Oak Alternatives

<table>
<thead>
<tr>
<th>TIME PERIOD</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEFORE HARVEST</td>
<td>Definition of wine profile</td>
</tr>
<tr>
<td>BEFORE ALCOHOLIC FERMENTATION (AF)</td>
<td>Introduction of Oak, pumpable size</td>
</tr>
<tr>
<td>DURING AF</td>
<td>MOX at 18–19 Brix, 10mg/l in 6-12hrs</td>
</tr>
<tr>
<td>AFTER AF</td>
<td>Selecting good candidates for aging</td>
</tr>
<tr>
<td></td>
<td>Clarification</td>
</tr>
<tr>
<td></td>
<td>Start of Micro-ox, Phase 1</td>
</tr>
<tr>
<td>AFTER MLF</td>
<td>Continuous of MLF, Phase 2</td>
</tr>
<tr>
<td></td>
<td>Introduction of toasted oak (Contact for 2 weeks to 6 months)</td>
</tr>
<tr>
<td>BEFORE BOTTLING</td>
<td>Macro-dose if needed against reduction</td>
</tr>
<tr>
<td></td>
<td>Final touch (chips, powder or shavings)</td>
</tr>
</tbody>
</table>

Before Harvest

Describing the wine profile:
Before purchasing the oak, and in order to be prepared to Micro-oxygenate (MOX) a wine as soon as possible, it’s important to define the key characteristics of the wine we will make:
- Oak Profile: % New barrel Equivalent, French/American, Toast type
- Flavor Profile: Compatibility oak/fruit profile
- Color: type of color (dark red, ruby, etc.)
- Wine cycle time: Time between harvest and final customer. This will define the type of tannin we want:
  1. Tannin that can age. 2. Tannin which softens rapidly for a quick rotation.

The wine description will help future decision making, since the future tasting will be focused only on these components. It will facilitate the selection of treatment and enable an early start.

Before alcoholic fermentation

Early addition of oak alternatives will help in the structure of the wines: in particular the tannin profile.
- Knowledge of grapes from previous year will show benefit of using early oak additions in certain lots.
- Since the extraction time will be limited to the fermentation period, we need to focus the usage and type of oak products to those which have a quick extraction.
  1. So only pumpable size products are used (i.e. shavings and powder),
  2. Untoasted or light toast are preferred to focus on tannin contribution only
  3. Higher toast oak can be used to boost the aromatic components.

During alcoholic fermentation

MOX can be used early in the fermentation phase to increase yeast survival rates at the end of the fermentation. A 10mg/l addition around 18–19 Brix will increase substantially the yeast population and limit the potential for stuck fermentations.

After alcoholic fermentation, Phase 1 MOX

First step is selecting good wine candidates, MOX will help wines: that need color stabilization, have un-mature tannin structure, that need to cover green flavors.
As soon as red wines are pressed, phase 1 MOX can be started. This phase is key, since tannins are highly reactive, so large amounts of oxygen can be added. The window is short, since it is before the start of the malolactic fermentation (MLF).
- Doses of 20 to 60 mg/l/month could be used.
- Wine should be carefully monitored with tastings 2–3 times per week.
- If acetaldehydes are tasted, the doses should be reduced. At this stage acetaldehyde is of limited concern since there are two strongly reduced phases that will occur after MOX: MLF and SO2 additions.
- Doses should be gradually decreased.
- MOX should be stopped during MLF to limit microbiological risks. MOX should also be stopped after high additions of SO2 since Micro-Oxgenation requires relatively low concentrations of SO2 to be effective.
(Sometimes Lysozymes or small doses of sulfur could be added to increase the time window of treatment.) During this phase, clarification of wine is important.
- Aromas, colors and tannins could bind with the fermentation lees that are not settled.
- Separating solids will help avoid aroma losses, color losses and reduced hydrogen sulfide (H2S) characters.

After Malolactic fermentation

Both oak alternatives and MOX could be used during the same time period. It may be beneficial to do it in two different tanks, one tank (biggest volume) focusing on MOX and another tank with an oak concentrate.

MOX in phase 2:

Doses start lower: 2–5 mg/l/month and should be reduced gradually (in a barrel doses are less than 1mg/l/month).
- The treatment phase may take several months.
- Careful monitoring of the wine by tasting and measurement of Dissolved Oxygen (DO) weekly is recommended. If hints of oxidation or a DO variation of 0.2mg/l occur, doses should be reduced. No acetaldehyde smell is acceptable in this phase since the wine won’t go through another strongly reduced phase post MLF inoculation or initial SO2 additions.
- MOX is preferably stopped 2 months before bottling in order to track any possible reductive (H2S) characters.

Oak alternatives:

Additions of staves: For 6 months approximately to extract all the wood compounds,
- Chips addition: 12 months approximately to extract all the compounds
- Shaving and powder: 1–2 weeks approximately.
- For the chips and staves, it is important to monitor the extraction in order to transfer the wine when the desired oak profile is achieved.
- For chips, shavings and powder, bench trials should be performed to understand the effect and adjust the quantities added in tank.

Before bottling

A month before bottling, some final minor adjustments could be made to readjust the wine profile.
- If the wine is reduced: addition for a short period of time of 2 to 10 mg/l of O2 to oxidize the sulfur compounds can be beneficial.
- If oak flavor needs to be enhanced, a final addition of powder or shavings could be added to readjust the oak flavor levels.

Red Wine Aging with Micro-Oxygenation and Oak Alternatives

Micro-oxygenation (MOX)

Dose is limited to 10 mg/l per month.
- Dose to be carefully monitored.
- Micro-oxygenation is effective during alcoholic fermentation (AF) and before MLF.
- Micro-oxygenation is helpful during alcoholic fermentation.
- Micro-oxygenation should be stopped during MLF.
- Micro-oxygenation should be stopped after high additions of SO2.
- Micro-oxygenation is recommended.

OAK ALTERNATIVE

- Wine cycle time: Time between harvest and final customer.
- Color: type of color (dark red, ruby, etc.)
- Flavor Profile: Compatibility oak/fruit profile
- Oak Profile: % New barrel Equivalent, French/American, Toast type

Winemaking Services – Reference Guides
The basics for making wine have gone unchanged for hundreds, if not thousands, of years.

However, today, technology is allowing winemakers to not only make more and more wine, but better wine than ever before. It was because of this advancement in the industry that ATPGroup formed the Process Technologies Division (PTD).

The mission of PTD is to guide the wine industry through this ever-changing landscape by offering all wineries expertise on how to take advantage of the many ongoing innovations, products, practices and services being introduced to the wine industry on a nearly daily basis.

The PTD team is made up of industry specialists that are solution experts in wine-processing equipment, footprint analysis, streamlining workflow processes, business modeling for ROIC, capital preservation, long-range capital planning, as well as buy side mergers and acquisitions assistance.

Here’s what you can expect from ATPGroup’s Process Technologies Division.

- PTD draws on decades of winemaking experience and technical experts possessing a knowledge base of impressive breadth to provide real world experience and best practices to client engagements.

- We offer time-tested leadership in business and technology to wineries seeking to become safer, more efficient and more environmentally sustainable.

- Our science department within the PTD organization offers science-driven innovation and history of problem solving success to address your particular need or situation.

- PTD offers customized solutions across numerous areas of excellence:
  - Workplace safety
  - Employee training programs
  - Environmental management
  - Energy efficiency
  - Asset productivity
  - Footprint analysis and planning
  - Short and long range capital planning and effectiveness
  - Strategy development and implementation
  - Operational risk assessment

All of this doesn’t change the basics for making wine. It still demands your time and attention, but you can count on us and our expertise and help you make what you make better.
Equipment

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**Equipment – Filtration**

**TMCI Padovan Nitor SMART Cross-Flow Filter System**

The Padovan Nitor SMART Cross-Flow Filter System is the solution for cross-flow filtration where space is at premium, thanks to its large filtering surface despite its compact dimensions. (Available as 40 m² or 80 m².)

- Extremely compact yet fully automatic.
- Micro-filtration membrane for preparation prior to bottling.
- Inert gas sparging with no significant oxygen pick up.
- Compact integrated automatic CIP system.
- Automatic flow and integrity testing of membranes.
- Allen Bradley PLC system standard, with customization available.
- Unique membrane design provides superior life.

**TMCI Padovan Dynamos Cross-Flow Filter System**

The Padovan Dynamos Cross-Flow is a patented, rotating, high-solid filter with the innovative calibrated back-pulse system. Its patented system allows filtering not only lees, but also wines, with optimal results, even better than the ones obtained with tubular filters.

Unlike other high-solids, cross-flow systems, Dynamos can run up to 24 hours before needing to be cleaned. (Available from 2 m² to 40 m² and multiples.)

- Eliminates the need to use filter aids such as D.E. for lees filtration.
- Solids-free juice and wine lees can be bottled directly as with a traditional cross-flow filtration system. It can be used to polish wine that has been racked and is relatively low in suspended solids.
The Padovan Taylo Rotary Vacuum Filter is a new generation of rotary vacuum filters that allows for the heavy filtration of musts and juices, as well as the filtration of lees and residual bottoms. (Available from 3 m² to 70 m².)

- All stainless steel and Nortex construction.
- Centrifugal pump for pre-coating.
- Reversible positive displacement pump for feeding lees.
- Inverter controlled drum rotation with automatic knife advance.
- Water-cooled vacuum pump with available recycling system.
- Drum design is simple to maintain and sanitize.

The Padovan Nitor Cross-Flow Filter is made of stainless steel and is equipped with a service tank, feed-boost circulation pumps, control instruments and is fully-automated. The programmable back-wash system makes it possible to achieve a higher constant filtration level with prolonged filtration cycles. (Available from 40 m² up to 400 m².)

- Micro-filtration membrane for preparation prior to bottling.
- Inert gas blanketing during filtration.
- Automatic flow and integrity testing of membranes after cleaning.
- Optional in-line turbidity monitoring, batch processing and tank management.
- Low product losses.
- Modular design allows for split capacity filters.
The Padovan Master Sheet Filters is a steel and plated stainless steel sheet framework that holds steam-sterilizable and sanitary filters. (Available in two sizes: Master Light for still products filtration and Master Inox for still and carbonated products.)

**Standard Version**
- Chassis is carbon steel-plated with stainless steel AISI 304, on wheels.
- Drip tray made in stainless steel AISI 304.
- NORYL plates with gaskets in food grade silicone rubber.
- Butterfly valves in stainless steel for inlet and outlet.
- Sampling and drain tap in stainless steel AISI 304.
- 2 pressure gauges.
- External manifolds connected to fixed plate.
- Standard manual hydraulic closure for Mod. 101/81 and Mod. 101/101.
- Stainless steel plates and crossover plates available for all systems on request.

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The Padovan Pressure Leaf Green Filter is a leaf filter with filtering plates configured in horizontal positions that allow for a more uniform pre-coat on each of the filtering septums and is capable of rough or polished filtration. (Available from 2 square meters to 80 square meters.)

- Designed to be highly sanitary and easy to clean.
- Adjustable body feed allows for customizable operation.
- Wheeled tray for collection of spent cake after filtration.
- Scavenger filter to maximize efficiency.
- Suitable for use in many applications, specifically grape juice and wine.
- Each unit can be configured specifically to meet your needs.
- Pressure leaf filtration provides superior filtrate quality with minimal time and footprint.
- Maximum pressure up to 6 Bar, extending the filtration cycle.
ATPGroup is the exclusive American representative for a variety of presses and crusher-destemmers from Siprem International.

Siprem’s PA Vacuum Press, with its patented “vacuum system,” extracts must or wine of a much higher quality than is achievable using traditional systems. Models range from a tank size of 20 hectolitres to 505 hectolitres.

- Press construction is very similar to conventional pneumatic presses.
- Juice/wine is extracted by vacuum instead of pressure.
- Very gentle yet extremely efficient.
- Intelligent programming available.
- Enclosed system capable of pressing with inert gas.
- Programming and operation is identical to pneumatic presses.
- Units are self-contained requiring a very small amount of compressed air to operate valves.

SPXFLOW Centrifuge

ATPGroup is proud to be the SPX exclusive American representative to the wine industry. Their fining agents allow the recovery of fine particles (.05 to 500 micrometers) and/or promote a strong clarification of liquids by means of a very high peripheral centrifugal field (G-force).

They’re the best choice for any size winery.
- Excellent clarification efficiency with low oxygen pickup.
- Units are skid mounted.
- Simple maintenance protocols.
- On-line monitoring.
- Low operation cost due to low energy consumption.
- High-speed bowl gives excellent clarification efficiency.
- Unique bowl seal that needs no nitrogen blanket.
- Several hundred units in operation in the U.S.
Siprem’s Pneumatic Presses provide reliability, versatile use and simple operation through all processing phases controlled by PLC. (Available with tank capabilities of 8 hectolitres up to 450 hectolitres.)

- Built-in compressor on smaller units.
- Automatic washing system with powered high pressure hose cleaning behind drain channels.
- Intelligent programming available with optional sparkling wine program.
- Optional must pump for transfer from press to tank.
- Enclosed system capable of pressing with inert gas.
- Carbonic maceration capabilities.
- Storage of user-defined pressing programs.

Siprem PCM Continuous Membrane Press

The Siprem PCM Continuous Membrane Press provides unsurpassable performance made possible by the revolutionary system of continuous operation. Unbeatable productivity/quality yield ratio with models ranging from 10 tons per hour up to 45 tons per hour.

- Fractional must/wine separation.
- Gentle pressing process similar to conventional bladder presses.
- Complete automation of the various process operations.
- Innovative washing system controlled by PLC.

Siprem Pneumatic Press

Equipment—Presses

Equipment—Presses
The Padovan Flottaflux Flotation System is designed to reduce solids and provide clear juice or must, with minimal product loss, for all wineries regardless of size.

- Continuous separation of the solids from grape must and fruit juices.
- All contact parts in stainless steel.
- Automatic removal of solids via a rotating vacuum arm.
- Onboard dosing for gelatin, bentonite, and silica gel.
- Optional turbidity meter to monitor filtrate quality.
- Excellent juice yields with discharged solids greater than 30%.
- Filtrate clarity typically between 15 to 50 NTU.

The Siprem International Crusher/Destemmer is a versatile system that allows you to crush and destem, crush only or just destem only, without any significant equipment change. Models perform from 5 tons per hour up to 100 tons per hour.

- Variable speed drive controls cage rotational velocity.
- Optional draining hopper.
- Optional split cages available; variety of cage sizes available.
- Internal cage flushing system.
- All polished stainless steel.
- Easy access to cage and destemming shaft.
- Crusher rollers are adjusted externally.
- Inclined grape feed hopper with interchangeable destemming cages.
**Equipment—Stabilization**

Padovan's Kristalstop can cold stabilize in 90 minutes! This continuous tartaric stabilization system uses reusable tartrate crystals with flow-rates between 2,000 and 20,000 liters per hour.

**Standard Version**
- Recovery clip-on plate-heat exchanger with 2 flow meters and 1 flow regulation valve.
- Centrifugal feed pump, reactor and tank in stainless steel AISI 304.
- 3 recycling valves for not stabilized product.
- Remote multiple battery air-type condenser.
- Crystal separation and dosing device composed of tank, centrifugal multi-revolving pump, high-efficiency hydro-cyclones and crystal injection pump.
- Processing unit includes reactor with accessories, insulation in polyurethane foam and cladding in stainless steel.
- Electric switch-board with stainless steel box, complete of conductivity-meter and PLC discharge and washing.

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**Equipment—Flotation Systems**

The GB BevTec Portable Flotation System is a patented system that streamlines juice and wine clarification and eliminates costly, time-consuming cold settling.

With the addition of an optional separator tank, the system can run continuously at 8,000 gallons per hour with no batch limitations.

**GB BevTec Portable Flotation System**

**TMCI Padovan Kristalstop**
Equipment—Thermovinification Units

**TMCI Padovan Thor Thermovinification System**

The Thor Thermovinification system is a continuous process for the production of red and rosé wines.

The system is designed to rapidly extract color and desirable tannins as well as minimizing any loss of aromas.

**Standard models come in sizes of 10 tons per hour up to 100 tons per hour**

- Allows for vinification of red musts without the red grape skin.
- High color extraction with increased color stability and low lees production.
- Similar total phenolic values in 1 hour versus 10 days of conventional vinification.
- Rapid deactivation of oxidative enzymes, especially with botrytis laden grapes.
- No extraction of tannic components from the seeds.
- Significant energy savings when compared to competing flash-détente systems.

Equipment—Replacement Membranes

**Bartlett Press Membranes**

C.E. Bartlett Pty Ltd. supplies after-market press bladder membranes to nearly 90% of all the wineries in Australia. They have an excellent reputation as a manufacturer of quality products. And now they’re firmly established here in the U.S. through ATP.

ATPGroup is proud to have them as part of our portfolio of products.

- Membranes for all makes and models of wine presses.
- Unique 3-year warranty.
- Longtime supplier to the U.S. wine market.
**Equipment – Parsec**

**Parsec SAEn 5000, the first bus-based, fully integrated, automated, cellar control system.**

- Control over entire refrigeration system
- Reliability from the world leader in micro-oxygenation
- Complete control of the entire wine-making process
- Increased savings on power and energy usage
- Humidity and temperature control throughout the winery
- Complete system traceability at your fingertips
- System control from a single source – Parsec SAEn 5000

**Parsec SAEn 5000**

The world’s leading system for complete winery automation.
- Tailored for specific winery requirements and increased productivity.
- Independent supervision of features and equipment.
- Quadr@ software: Windows environment, touchscreen interface, remote control, multi-support (all computers, tablets and smartphones).
- Thermo-regulation, selective extraction and fermentation kinetics control.
- Smart Sprinkler.
- Micro- and Macro-Oxydation.
- Air-Mixing.

**Air Mixing M.I.**

This award-winning system is designed for the complete automation of red fermentation and is one of key expansions of the SAEn 5000.
- Water, power, labor and time saving.
- It’s programmable and extremely accurate.
- Accurate.
- Personalized for each application based on the level of extraction required.
The Parsec EVO 1000 provides automatic de-oxygenation and adjustment of dissolved CO2 with complete automation of O2 and CO2 probes.

- One machine- several oenological applications.
- Works in line with the filler or filters.
- Effective deoxygenation (<0,15 ppm ideal for organic wines).
- Decarbonization of wine before bottling.
- Instant carbonication of wines (sparkling wine production).
CDR WineLab Touch

The CDR WineLab Touch is a photometric, thermo-stated analyzer with solid-state emitters (LED). It is the ideal solution for fast and accurate lab analysis of wine and juice.

- Easy to use. No special training to operate is needed.
- It’s reliable, fast and extremely accurate.
- An economical way for wine and juice analysis.

Packaging: Each WineLab analyzer comes with:

- One variable volume pipette from 0 to 25 microliters.
- One fixed volume 50 microliter pipette.
- Support for cuvettes.
- Spare printer paper roll, 100 pipette tips.
- USB cable.
- Power cord.

Centrifuge

Ideal centrifuge to clean small size samples.

- Portable.
- 4,000 rpm.

Application: To be used in preparation of sample that present a high-level of suspended solids.

Ultrasound Bath

Portable ultrasound bath to remove CO₂ on small samples.

- Small, ideal where space is limited.
- Low power usage.

Application: To be used to prepare for WineLab analysis. Use increases test accuracy during fermentation.
Kits for CDR WineLab Analysis

These kits are pre-calibrated and come ready-to-use. These are pre-vialled, disposable reagents with low toxicity developed by the research laboratories of CDR. They have a 12 month shelf life and are optimized to be used with the WineLab.

Packaging: 10 single-use cuvettes per package.

<table>
<thead>
<tr>
<th>Test Performed</th>
<th>Measuring Range</th>
<th>Repeatability</th>
<th>Resolution</th>
<th>Testing Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugars in wine</td>
<td>0.10 – 18.00 g/L</td>
<td>0.2 g/L</td>
<td>0.01 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>Sugars in must</td>
<td>6.0 – 350.0 g/L</td>
<td>2 g/L</td>
<td>1 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>*Glucose and fructose in wine</td>
<td>0.05 – 18.00 g/L</td>
<td>0.2 g/L</td>
<td>0.1 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>*Glucose and fructose in must, sparkling wine</td>
<td>3.0 – 350 g/L</td>
<td>2 g/L</td>
<td>1 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>Free SO2</td>
<td>1 – 60 mg/L</td>
<td>1.5 mg/L</td>
<td>1 mg/L</td>
<td>3 min</td>
</tr>
<tr>
<td>Total SO2</td>
<td>15 – 250 mg/L</td>
<td>2.5 mg/L</td>
<td>1 mg/L</td>
<td>1 min</td>
</tr>
<tr>
<td>L-Malic acid</td>
<td>0.05 – 5.00 g/L</td>
<td>0.05 g/L</td>
<td>0.01 g/L</td>
<td>4 min</td>
</tr>
<tr>
<td>L-Lactic acid</td>
<td>0.05 – 4.00 g/L</td>
<td>0.05 g/L</td>
<td>0.01 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>*Malolactic fermentation</td>
<td>0.05 – 5.00 g/L</td>
<td>0.05 g/L</td>
<td>0.01 g/L</td>
<td>10 min</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>0.05 – 1.20 g/L</td>
<td>0.02 g/L</td>
<td>0.01 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>Total acidity</td>
<td>1 – 10 g/L, tartaric acid</td>
<td>0.13 g/L</td>
<td>0.1 g/L</td>
<td>1 min</td>
</tr>
<tr>
<td>pH</td>
<td>3.00 – 4.00</td>
<td>0.2</td>
<td>0.01</td>
<td>1 min</td>
</tr>
<tr>
<td>Alcohol by volume</td>
<td>0.1 – 17% vol.</td>
<td>0.2% vol.</td>
<td>0.1% vol.</td>
<td>5 min</td>
</tr>
<tr>
<td>Organic nitrogen</td>
<td>30 – 300 mg/L</td>
<td>2 mg/L</td>
<td>1 mg/L</td>
<td>4 min</td>
</tr>
<tr>
<td>Inorganic nitrogen</td>
<td>30 – 300 mg/L</td>
<td>2 mg/L</td>
<td>1 mg/L</td>
<td>4 min</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>18 – 300 mg/L</td>
<td>2 mg/L</td>
<td>1 mg/L</td>
<td>6 min</td>
</tr>
<tr>
<td>Gluconic acid</td>
<td>0.1 – 3 g/L</td>
<td>0.05 g/L</td>
<td>0.01 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>Glycerol</td>
<td>2 – 15 g/L</td>
<td>0.02 g/L</td>
<td>0.1 g/L</td>
<td>6 min</td>
</tr>
<tr>
<td>Copper</td>
<td>0.05 – 1.00 mg/L</td>
<td>0.03 mg/L</td>
<td>0.1 mg/L</td>
<td>5 min</td>
</tr>
<tr>
<td>Antocyanes</td>
<td>10 – 1,000 mg/L cyanidin-3-o-glucoside</td>
<td>15 mg/L</td>
<td>1 mg/L</td>
<td>1 min = 60 min for extraction</td>
</tr>
<tr>
<td>Polyphenols FC</td>
<td>150 – 3300 mg/L gallic acid</td>
<td>10 mg/L</td>
<td>1 mg/L</td>
<td>5 min</td>
</tr>
<tr>
<td>*Catechins</td>
<td>1 – 40 mg/L</td>
<td>2 mg/L</td>
<td>1 mg/L</td>
<td>5 min</td>
</tr>
<tr>
<td>*Total polyphenol index</td>
<td>2 – 100 D.O. 280 nm</td>
<td>0.4 D.O. 280 nm</td>
<td>0.1 D.O. 280 nm</td>
<td>11 min</td>
</tr>
<tr>
<td>*Intensity</td>
<td>1.0 – 40.0 D.O.</td>
<td>0.002 D.O.</td>
<td>0.001 D.O.</td>
<td>5 min</td>
</tr>
<tr>
<td>*Tintality</td>
<td>∞</td>
<td>0.002 D.O.</td>
<td>0.001 D.O.</td>
<td>5 min</td>
</tr>
</tbody>
</table>
**Mobile Services**

ATPGroup Mobile Services will bring the entire filtration process direct to your winery, which will save you time and money. Our equipment is the best in the industry and we do everything from setup, to entire filtration, to cleanup.

Just tell us what you need, when you need it and we'll do the rest.

**Lees Filtration Service**
- ATPGroup Mobile Services can filter juice, fermentation and bentonite lees at your premises and can provide you with a recover of product usually exceeding 80%.
- Our TMCI Padovan Taylo 10 can process volumes up to 4,000 gallons of lees in 8–10 hours. Our minimum suggested volume is 500 gallons. (DE will be provided to you at your usual rate and we will collect the DE for your disposal.)

**Cross-Flow Filtration Service**
- The TMCI Padovan Dynamo 20 High Solids Cross-Flow can be run for up to 24 hours before needing to be cleaned and doesn't require filter aids such as DE for lees filtration.
- Our Padovan Nitor 120sqm Cross-Flow Filter is a gentle, low operating pressure, membrane filtration that is highly respectful of the characteristics of your wine. With no DE waste and minimal oxygen pick up, we can provide you with brilliant quality wines at flow-rates up to 5,000 gallons an hour.
- Our Cross-Flow Filters are fully automatic and can efficiently filter large or small volumes of wine with high NTU levels. Using the Padovan SMART Nitor 40sqm unit, we can reduce product loss to less than 1% with volumes as low as 500 gallons.
- Filterability can be ascertained using our mobile analysis thus giving you a completely reliable Mobile Filtration Service that is designed to provide you with the tools you need to produce your wines and achieve their full potential.
Our ATPGroup Process Technologies Service and Maintenance department technicians concentrate on providing a variety of maintenance and repair services to ensure reliability, functionality and the integrity of your equipment, whether your equipment was purchased from us or not. Here are just some of the many services that our Service and Maintenance department offers.

- We will ensure your facility’s equipment is operating or repaired to a level of maintenance and operation as to not to disrupt your production process or overall operations.
- We can provide a range of ongoing services from predictive maintenance, preventative maintenance and corrective maintenance which we believe is crucial for keeping equipment running at peak performance.
- We can detect early signs of equipment fatigue that will save you on costly repairs and extend the life of one of your largest assets thereby helping you avoid downtime and money.
- We can source replacement parts for just about any piece of winery equipment in North America.
- We offer 24/7 emergency repair service that will quickly repair damaged equipment and/or components to ensure reduced downtime.
- If we are unable to repair onsite, then we will remove the equipment to our fully equipped maintenance department. There, our professionally trained and qualified technicians will diagnose the problem, repair or replace parts and return fully functioning.
- ATPGroup will provide a point-by-point “On Site Reliability Performance Inspection Report” every time your equipment is serviced.

With our wide range of industrial and commercial solutions coupled with day-to-day maintenance and 24/7 response to emergency calls, the Process Technology Services and Maintenance Department of ATPGroup is your single service and solution provider.
<table>
<thead>
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<th>Page</th>
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<td>Port and After Dinner</td>
<td>114</td>
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<tr>
<td>Decanters</td>
<td>115</td>
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</tbody>
</table>
Pinot Noir and Burgundy

Burgundy glasses are designed to capture the aroma and delicacy of the Pinot Noir grape. The balloon design directs the floral, earthy and fruity aromas to the nose while playing down heavier shades of alcohol and wood that might drown out these subtle notes.

A wide rim directs the flow right over the front and center zones of the tongue, playing down the acidity and accentuating the rounder, mellower qualities of these wines.

Since 2010, ATPGroup has been the exclusive U.S. distributor of Stölzle Lausitz glassware to all wineries and tasting rooms across America.

Not familiar with Stölzle Lausitz glassware? Well, here’s what you need to know:

For over 125 years, Stölzle Lausitz has been recognized as Europe’s leading designer, manufacturer and marketer of high-quality, 100% lead-free crystal glassware for the tasting room, food service, hotel and retail markets.

Through innovative design coupled with high-tech and environmentally-advanced factories, Stölzle produces glassware that is higher in clarity, brilliance and resistance to breakage and scratches from dishwashing than most glassware found in the market today. And, better yet, all are at a fraction of the cost of other high-end glassware.

With ATPGroup’s in-stock program, customers have the ability to receive their orders within days, not weeks.

On top of that, we offer through our partner decorators, a full range of laser-etch and print artwork services allowing us to customize glasses with your artwork or logo to the size and color desired. Turnaround times are fast, with most orders decorated in two weeks or less.
Stölzle Glassware

Cabernet Sauvignon and Bordeaux

Our Bordeaux glasses are designed for Cabernet Sauvignon based wines, as well as big, tannic wines offering lots of spice and ripe fruit.

The large bowl allows the bouquet to develop layers of aroma. The narrow opening concentrates the aromas towards the nose. The thin rim directs the wine towards the front of the tongue. This allows the concentrated flavors to dominate before the tannins are directed towards the back of the tongue.

Stölzle Glassware

Syrah, Shiraz and Zinfandel

From the delicate raspberry flavors of a Shiraz to the jammy, dark fruit and spice of a Zinfandel, these red wines need to display their balance of tannin, fruit and aroma.

A large bowl and narrowed rim are necessary to aerate and concentrate aromas towards the nose while directing a balanced flow over the taste zones of the tongue. These glasses are also well-suited to a wide array of red wines as well as full-bodied white wines.
### Custom Decorated Glassware

Custom decorated glassware is the perfect way to promote your brand and create customer loyalty. We offer, through ATPGroup, a full range of laser-etching and screen printing artwork services allowing us to customize your artwork or logo to any glass, any size, any color.

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Volume</th>
<th>Height</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 00 02</td>
<td>Weinland</td>
<td>350 ml / 12¼ oz</td>
<td>7”</td>
<td>3”</td>
</tr>
<tr>
<td>100 00 02</td>
<td>Universal</td>
<td>387 ml / 13 oz</td>
<td>7”</td>
<td>3½”</td>
</tr>
<tr>
<td>220 00 02</td>
<td>Experience</td>
<td>350 ml / 12¼ oz</td>
<td>8½”</td>
<td>3¼”</td>
</tr>
<tr>
<td>200 00 02</td>
<td>Classic</td>
<td>370 ml / 13 oz</td>
<td>8”</td>
<td>3”</td>
</tr>
<tr>
<td>376 00 02</td>
<td>Ultra</td>
<td>365 ml / 12½ oz</td>
<td>7½”</td>
<td>3”</td>
</tr>
<tr>
<td>331 00 03</td>
<td>Quatrophil</td>
<td>404 ml / 14¼ oz</td>
<td>8½”</td>
<td>3½”</td>
</tr>
<tr>
<td>147 00 03</td>
<td>Exquisit</td>
<td>350 ml / 12¼ oz</td>
<td>8”</td>
<td>3½”</td>
</tr>
<tr>
<td>200 00 03</td>
<td>Classic</td>
<td>370 ml / 13 oz</td>
<td>7½”</td>
<td>3¼”</td>
</tr>
<tr>
<td>376 00 03</td>
<td>Ultra</td>
<td>376 ml / 13½ oz</td>
<td>8½”</td>
<td>3”</td>
</tr>
<tr>
<td>210 00 03</td>
<td>Grand Cuvée</td>
<td>365 ml / 12½ oz</td>
<td>7½”</td>
<td>3”</td>
</tr>
</tbody>
</table>

### Stölzle Glassware

#### Chardonnay

These glasses are designed to deliver the finer qualities of classic White Burgundy and Chardonnay as well as a host of other white wines. A tapered, gently curved bowl keeps temperatures low and aromas focused. The narrow rim directs the flow across the taste zones of the tongue with a balance of sweetness and acidity. The heightened aroma along with the simple shape matches a variety of white wines from dry and fresh to voluptuous and rich.

#### Sauvignon Blanc

Whether you’re tasting a crisp Sauvignon Blanc, a refreshing Chablis, an aromatic Riesling or a treasured and rich Montrachet, a white wine glass of the proper structure is essential. A gently curved, narrow bowl keeps the temperature low and aromas focused. The tapered rim delivers the flow across the taste zones of the tongue with a balance of sweetness and acidity crucial to white wines. These glasses are appropriate for light-bodied red wines as well as rosés.
The Champagne flute has a lot of work cut out for it when it comes to delivering what’s in the glass. A small surface area on the top is necessary to preserve the bubbles in a glass of sparkling wine, keeping the “mousse” intact. A tapered, narrow rim sends effervescence and aroma to the nose while controlling the flow over the tongue, keeping a balance between cleansing acidity and savory depth.

All the champagne stems have a sparkling point in the base of the bowl. The carbon dioxide in the sparkling wine nucleates on this broken surface spot to create an ongoing stream of bubbles in the glass that continue long after that of glasses without this feature.
Sweetness has gotten a bad rap from a new generation of “drier is better” wine drinkers, but that all goes out the window when a glorious port or late-harvest Riesling is in the glass. A narrow bowl brings fruit and floral aromas typical of dessert wines straight to the nose. A wide rim controls the pour across the tongue, allowing sweetness and/or acidity to play in perfect balance.

An after dinner drink is best enjoyed in a glass that maximizes its taste, smell, and appearance. A brandy snifter should have a short stem and a wide bell-shaped bottom to allow a person’s hand to warm the glass while holding it. The glass then narrows at the rim, trapping the aroma. Tulip shaped glasses are also very good for trapping aroma. The gentle slope upwards towards the nose provides maximum aroma, flavor and impact on the senses.

Stölzle Glassware

Port and After Dinner

Stölzle Wine Decanters are more than just a stylish vessel for wine. All of our wine decanters allow wines to breathe. They can soften tannins and open up bouquets and aromas. Perfect for wines with sediment, wine decanters allow for clarity in a pour, giving you a refined texture as well as flavor.

--

Stölzle Glassware

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