With this issue of our Wine and Juice Product catalog, we at ATPGroup would like to salute the many regions and wineries across North America that have helped us become one of the largest and most-trusted providers of enology products, cellar supplies, winemaking equipment, glassware, and numerous winery products and services. À votre bonne santé continue!

Along just about every road in California, you’ll find someone is growing grapes.
A vineyard in the Okanagan Valley of British Columbia gets a little water.
Welcome to 2019!

ATPGroup has continued to undergo a remarkable evolution in the past five years as we have pursued our vision to be the leading supplier of solutions to the Wine and Juice industries. One of the most profound changes over this period of time has been the richer understanding of and the deeper commitment to the type of products and services that you, our customers, require, regardless if you produce a million cases a year or a few hundred.

Our portfolio now includes a robust line up of tannins, yeasts, fining agents, stabilizers and antioxidants, enzymes, malolactic bacteria and nutrients among our range of enology products. Add our cellar chemicals, filtration aids, and best in class products for cleaning and sanitation and that equals solutions for every winemaker and cellar master.

2018 saw the delivery and installation of the world’s largest Red Hunter Thermo-vinification/Flash Détente system, while enjoying continued success with our Dynamos High Solids Cross Flow Filter. Crush pad equipment, centrifuges, and lab equipment round out our offerings for producing the quality of wine or cider that you proudly call your own. These machines exemplify ATPGroup’s continued commitment to bringing innovation to our industry.

The final glory is enjoying your creation in a Stölzle wine glass. Our robust range of elegant lead-free crystal stemware, made in Germany, is readily available for your tasting room or just for your own enjoyment at home.

Making sure we offer the right products goes hand-in-hand with storing them in the right places, which means better service and advantageous freight costs with our expanded warehouse operations. We are now up and running at our newest warehouse location, Grandview, Washington. This is the perfect hub for our wine and juice customers located across Washington, Oregon and Idaho. In addition, our Paso Robles facility has doubled in space and we will be adding to both of these locations an expanded services portfolio that will include mobile filtration, equipment parts and repair services.

Best-in-class products and services needs best-in-class industry professionals working with you to improve your wine or juice. This is what sets ATPGroup apart from the competition.

My family and I want to personally thank you for all the many years of support. We realize you have a choice with whom you do business, and we are honored that you select ATPGroup time and time again.

A toast to a prosperous future for all. Salute!

Luca Zanin, President
Did you know that **Texas** is one of the oldest wine-making states in America? Wine was produced here by Spanish missionaries around 1660 near what is now El Paso. Nowadays, because of its vast range of micro-climates, you can find wineries all over the state, growing grapes from French and Italian to Spanish varietals and producing an equally wide range of wines to go along with all that Texas beef.

### Enology Products

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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-Floa 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 and 25 kg.

Enology Products—Enzymes

### Zyme-O-Aroma Plus – Aroma Enhancing Enzyme

Increases free 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:** End of fermentation.

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

### Zyme-O-Stab

Liquid pectinase enzyme with secondary protease activity formulated for juice applications along with heat process technologies. The proper use of Zyme-O-Stab ensures a fast and effective reduction of proteins which will 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 along with heat treatment like flash pasteurization or flash détente.

**Packaging:** 25 kg drums.

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

### Vin-Lyo (Lysosome) – Microbial Control Agent

- Naturally occurring enzyme isolated from egg whites.
- Inhibits the production of VA from the Lactic Acid Bacteria when added prior to re inoculating a stuck or slow fermentation.
- Inhibits MLF onset in a wine which has only partially completed MLF.
- Inhibits the production of VA from the Lactic Acid Bacteria when added prior to bottling.

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

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

### Zyme-O-Glucanase

Zyme-O-Glucanase has been developed especially for enhancing the lysis of yeast cells during lees contact and for filtration improvement in wine processing especially in the case of grapes contaminated by Botrytis cinerea (high glucan content).

- Zyme-O-Glucanase is a highly concentrated granulated β-glucanase.
- The enzyme has been purified to remove cinnamyl-esterase activity.

**Application:** Zyme-O-Glucanase is very active at typical must pH. Dilute 20 times the enzyme weight of chlorine-free water, add directly into the must or wine and mix well to homogenize into the tank.

**Packaging:** 500 g and 25 kg.

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

**Packaging:** 25 kg drums.

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

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- Inhibits the production of VA from the Lactic Acid Bacteria when added prior to re inoculating a stuck or slow fermentation.
- Inhibits MLF onset in a wine which has only partially completed MLF.
- Inhibits the production of VA from the Lactic Acid Bacteria when added prior to bottling.

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

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**Application:** Zyme-O-Glucanase is very active at typical must pH. Dilute 20 times the enzyme weight of chlorine-free water, add directly into the must or wine and mix well to homogenize into the tank.

**Packaging:** 500 g and 25 kg.
Enology Products – Tannins

**Cherry-Tan**

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, 5 kg packet and 500 g.

**Recommended Dosage:**
- 0.2 – 0.6 lb/1,000 gal (powder), 2 – 7 g/hL.

**Color-Tan**

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 in 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), 10 – 25 g/hL (powder), 25 – 50 g/hL (liquid).

**Gallic-Tan**

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 tyrosinase 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, 25 kg drum and 500 g.

**Recommended Dosage:**
- 0.4 – 1.2 lb/1,000 gal, 5 – 15 g/hL.

**Color-Tan NT**

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.

**Recommended Dosage:**
- 0.5 – 2 lb/1,000 gal, 6 – 25 g/hL.

**Enology Products – Tannins**

**Querqua-Tan Rouge**

Implements 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 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, 2 – 6 g/hL.

**Querqua-Tan Blanc**

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:** 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.

**Recommended Dosage:**
- 0.5 – 2 lb/1,000 gal, 6 – 25 g/hL.

**Querqua-Tan NT**

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 treatment or heating.
- 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, 2 – 6 g/hL.
Enology Products – Tannins

**Querca-Tan UT**
Enhances 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 favor, oxidation).

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

**Packaging:** 500 g and 1 kg bottle.

**Recommended Dosage:**
- 0.15 – 1.2 lb/1,000 gal.
- 2 – 15 g/hL.

**Querca-Tan MK**
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 persistence 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 g and 1 kg bottle.

**Recommended Dosage:**
- 0.4 – 1.2 lb/1,000 gal.
- 5 – 15 g/hL.

**Querca-Tan VN**
Helps to stabilize color and improve sensory attributes of the wine.
- Prolongs the aromatic persistence and softens the finish, while enhancing the aromatic complexity with nuances of sweet vanilla and cocoa.
- 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 g packet (powder) and 1 kg bottle (liquid).

**Recommended Dosage:**
- 0.15 – 0.2 lb/1,000 gal (powder).
- 0.3 – 2.4 lb/1,000 gal (liquid).
- 2 – 15 g/hL (powder).
- 4 – 30 g/hL (liquid).

**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.
- Before bottling to complete the aromatic profile.

**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.
- 4 – 7 g/hL.

**Tani-Complete**
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 extract from the heart of the Limousin oak region in France.
- Recommended for red and white wines during the aging process.

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

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

**Recommended Dosage:**
- 0.2 – 1.6 lb/1,000 gal.
- 2 – 20 g/hL.

**Tani-Grape**
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 g bottle and 1 kg bag.

**Recommended Dosage:**
- 0.2 – 2.0 lb/1,000 gal.
- 2 – 25 g/hL.

**Tani-Complete**
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 extract from the heart of the Limousin oak region in France.
- Recommended for red and white wines during the aging process.

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

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

**Recommended Dosage:**
- 0.2 – 1.6 lb/1,000 gal.
- 2 – 20 g/hL.
Enology Products – Tannins

**Tani-Structure**

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. 2 – 15 g/L.

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Enology Products – Oak Alternatives

**Oak Blocks**

ATG Group’s Oak Block are well suited for medium long range aging. Available with two toast levels: Medium Toast and Medium Plus Toast.
- 100% Quercha Petraea from France.
- To achieve best sweetness and roundness, we suggest contact time between 2 to 6 months.
- Block size: 1.97” x 1.97” x 0.63”
- Oak Blocks are Food Grade certified and complies with FDA and TTB regulation.

**Packaging:** 10 kg infusion bags packed inside an external bag.

**Recommended Dosage:** 2 to 5 g/liter or 1/6 to ½ lb/1000 gal. Depending on dosing rate, a 10 kg bag is sufficient to treat 20 – 50 hl (530 to 1300 gallons) of wine.

**Oak Chips**

Chips are toasted in a distinct manner resulting in a chip with forthcoming 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

**Packaging:** 10 kg mesh infusion bags for easy use.

**Oak Powder**

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: Heinrich House Toast and Untoasted.

**Packaging:** 10 kg bag.

**Oak Shavings**

The unique toast profiles result in shavings which provide structure, “toastiness” and vanilla.
- Available in American Oak. Toast level – Heinrich House Toast.
- Chips can be added direct to crusher or at first pump over.

**Packaging:** Double bagged in 10 kg bags to preserve freshness.

**Oak Staves**

Oak Staves are available individually and create a “barrel like” oak profile in stainless steel tanks.
- 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.

**Packaging:** 16 individual staves.

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**Tannin Chart**

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<tr>
<th>Tannin Type</th>
<th>Fermentation</th>
<th>Aging</th>
<th>Finishing</th>
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<tr>
<td>Cherry Tan</td>
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<td>Color-Tan</td>
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<td>Tani-Structure</td>
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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:** 15 kg.

**Recommended Dosage:** 0.2 to 0.9 lb/1,000 gals, depending on the juice or wine type.
2 – 11 g/L.

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 astrinency.

**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.
2 – 10 g/L.

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.
2 – 20 g/L.

Coldstab Cel
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 filtrability 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.

**Recommended Dosage:** 4 – 8 lb/1,000 gals.
50 – 100 g/L.

Defy-Ox
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.
10 – 50 g/L.

Fermo-Casein
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.
- The 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.
10 – 50 g/L.
**Liquagel-50**
- 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.

**Recommended Dosage:**
- 0.25 – 4 lb/1,000 gal.
- 3 – 50 g/hL.

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

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**Liquasil-30**
- 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.

**Recommended Dosage:**
- 1 – 5 lb/1,000 gal.
- 10 – 60 g/hL.

**Packaging:**
- 25 kg drum.

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**LGA-20**
- 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.

**Recommended Dosage:**
- 1 – 10 lb/1,000 gal.
- 10 – 100 g/hL.

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**LGA-30**
- 30 percent liquid gum arabic solution derived from the solubilization of the gum arabic of the most selected varieties of the Acacia tree.
  - With an electropositive charge LGA-30 can be used as a colloidal protector which also aids in the prevention of haze formation due to instabilities while stabilizing color.
  - Other benefits: Enhance body and structure, increase roundness on the palate, inhibit formation and precipitation of tannate crystals.

**Application:** To be added prior to final filtration.

**Recommended Dosage:**
- 1 – 6 lb/1,000 gal.
- 10 – 70 g/hL.

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

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**MustGuard**
- 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.

**Recommended Dosage:**
- 1 – 2 lb/1 U.S. ton of grapes.
- 10 – 30 g/hL.

**Packaging:**
- 5 kg bag.

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**Phenol-Fine Plus**
- 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.

**Recommended Dosage:**
- 1 – 8 lb/1,000 gal.
- 10 – 90 g/hL.

**Packaging:**
- 25 kg bag.
Enology Products – Fining Agents, Stabilizers and Antioxidants

**Spring’Finer – Allergen Free Fining**
Exclusively from yeast origins, Spring’Finer is a high molecular yeast protein that is allergen-free and can be considered the sole fining agent totally integrated in wine elaboration. Spring’Finer also helps reduce bitterness and astringency in your wine.

**Packaging:** 125 g.

**Recommended Dosage:**
- 0.4 – 1.5 lb/1,000 gal (juice);
- 0.4 – 1.2 lb/1,000 gal (red wine);
- 0.1 – 0.4 lb/1,000 gal (white and rosé wines).

**5 – 20 g/hL (juice); 5 – 15 g/hL (red wine); 1 – 5 g/hL (white and rosé wines).**

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**Puri-Bent**
Pure, highly refined bentonite obtained from highest-quality montmorillonate 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.
- 10 – 50 g/hL.

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**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 “pinning” 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.
- 10 – 70 g/hL.

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**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.
- 10 – 70 g/hL.

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**Notes**

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Enology Products – Fermentis Safoeno™ Yeast

The result of experience and expertise in the production and the drying of yeast and yeast derivatives, Easy-2-Use™ is a range of yeasts, nutrients and functional products that are designed to facilitate fermentation operations and save time during harvest.

Our 7 Easy-2-Use™ yeast strains have been intensively tested to insure viability, fermentation abilities and organoleptic profiles uniformity with all types of rehydration procedure (normal rehydration, cold or hot water, direct inoculation in the must). Those who have tried Easy-2-Use™ yeasts will never look back!

**Preserved Viability in all rehydration conditions**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Viability (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°C (60°F)</td>
<td>90.2</td>
</tr>
<tr>
<td>18°C (64.4°F)</td>
<td>88.0</td>
</tr>
<tr>
<td>20°C (68°F)</td>
<td>87.4</td>
</tr>
<tr>
<td>30°C (86°F)</td>
<td>86.8</td>
</tr>
<tr>
<td>37°C (98.6°F)</td>
<td>83.5</td>
</tr>
<tr>
<td>43°C (109.4°F)</td>
<td>82.7</td>
</tr>
</tbody>
</table>

**Maintained fermentation performances with all rehydration conditions**

**Alcohol fermentation kinetics**

Yeast preparation conditions: Usual: rehydration in tap water at 35/37°C (95–98.6°F) then progressive acclimatization to must temperature with must addition before inoculation. Cold: rehydration in tap water at 15/17°C (59 – 62.6°F), Must: direct pitching. Dotted line: average fermentation temperature.

**Triangular Tasting**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usual vs Cold</td>
<td>NS</td>
</tr>
<tr>
<td>Usual vs Must</td>
<td>NS</td>
</tr>
<tr>
<td>Cold vs Must</td>
<td>NS</td>
</tr>
</tbody>
</table>

Tests conducted by Meurice Institute (Brussels, Belgium) and Brown S.A., Laboratorio de Servicios en Microbiología y Biotecnología Enológica (Mendoza, Argentina) on easy 2 use Safóeno HD5135, a strain designed for the production of full bodied... but smooth reds.

NDA 21
Isolated in Sicily, NDA 21 produces harmonious, intense colored and well balanced red wines with persistent fruit and spice aromatics.

**Recommended Dosage:** 2 lb/1,000 gal. 25 g/ha.

**Enology Products – Fermentis Safoeno™ Yeast**

**HD S135**
Recommended for the production of harmonious, full bodied wines with persistent fruit.
- High alcohol tolerance (15%), fast kinetics and low nitrogen requirement.
- Brings a very good structure balanced with a round mouthfeel (soft tannins).
- Easy-2-Use™.
- **S. cerevisiae; x. cerevisiae** (hybrid cerevisiae and bayanus).

**Application:** Ideal for fruit driven, short to middle aging premium red wines: Merlot, Cabernet Sauvignon, Zinfandel, etc.

**Packaging:** 500 g packet and 10 kg.

**Recommended Dosage:** 2 lb/1,000 gal. 25 g/ha.

**HD S62**
Recommended to produce deeply colored and structured wines.
- High alcohol tolerance (15%), fast kinetics and low nitrogen requirements.
- Low production of higher alcohols and esters, fresh fruit oriented.
- Strong malic acid consumption favoring MLF.
- **Easy-2-Use™**.
- **S. cerevisiae; x. cerevisiae** (hybrid cerevisiae and bayanus).

**Application:** HD S62 favors long aging conditions but can also bring structure and fresh fruit intensity to young wines. Premium Cabernet Sauvignon, Merlot, Tempranillo, Malbec, Sangiovese, Grenache, etc.

**Packaging:** 500 g package.

**Recommended Dosage:** 2 lb/1,000 gal. 25 g/ha.

**UCLM S377**
Ideal for production of high quality red wines.
- Good alcohol tolerance (14.5%) and high nitrogen requirements.
- This strain has a slow kinetics and requires regular temperature. It is well adapted to long maceration to finely structure the wines.
- Low VA, H2S and SO2 production.
- **Easy-2-Use™**.
- **S. cerevisiae; x. cerevisiae** (hybrid cerevisiae and bayanus).

**Application:** Middle to long aging fine red wines (Cabernet Sauvignon, Cabernet Franc, Zinfandel, etc.) and popular on Malbec and Tempranillo.

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

**Recommended Dosage:** 2 lb/1,000 gal. 25 g/ha.

**NDA 21**
Isolated in Sicily, NDA 21 produces harmonious, intense colored and well balanced red wines with persistent fruit and spice aromatics.

- **Easy-2-Use™**
- **S. cerevisiae; x. cerevisiae** (hybrid cerevisiae and bayanus).

**Application:** NDA 21 is well suited to short aging wines. It is appreciated on Mediterranean varieties (Syrah, Mourvèdre) and other spicy varieties (Zinfandel).

**Packaging:** 500 g packet and 10 kg.

**Recommended Dosage:** 2 lb/1,000 gal. 25 g/ha.
Enology Products – Fermentis Safoeno™ Yeast

**SC 22**
SC 22 is the very first strain selected for wine application. It is a classic strain for grand cru, neat and clean fermentations in respect of premium fruits.
- Good alcohol tolerance (15%), medium kinetics and medium nitrogen requirements.
- This is a very low producer of volatile acidity.
- Well adapted to barrel fermentation with limited temperature control.
- Easy-2-Use™
- S. cerevisiae; x. bayanus.

**Application**: Suited for all varieties: red (Cabernet Sauvignon, Cabernet Franc and Merlot), white (Chardonnay, Viognier, Chenin Blanc) and rosé.

**Packaging**: 500 g packet.

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

**25 g/hL.**

**STG S101**
Recommended for musts with cold pre-fermentation maceration, carbonic maceration and thermovinification.
- Alcohol tolerant between 13% - 13.5%, slow fermenter.
- High ester production.
- Very low VA, low H2S and SO2 production.
- Wines produced are characterized by high ester production, fruity and floral aromas.
- Easy-2-Use™
- S. cerevisiae; x. cerevisiae.

**Application**: Perfect for light and primeur red wines. Suited for Grenache, Pinot Noir, Gamay.

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

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

**25 g/hL.**

**BC S103**
Recommended for extreme winemaking conditions. BCS103 is known for clean fermentations that respect the varietal character.
- Very high alcohol tolerance (up to 18%).
- Wide fermentation temperature spectrum: 10 – 35 C (50 – 95° F).
- Ideal to restart stuck or sluggish fermentations with very low H2S and VA production.
- Easy-2-Use™
- S. cerevisiae; x. bayanus.

**Application**: Suited for Cabernet, Zinfandel, Chardonnay, Sparkling Base, high brix musts.

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

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

**25 g/hL.**

**VR 44**
VR 44 is characterized by excellent fermentation kinetics, respect for varietal aromatics and resistance to extreme winemaking conditions.
- Good alcohol tolerance (16%), fast fermentation and very low nitrogen requirements.
- Wide fermentation temperature spectrum: 10 – 35° C (50 – 95° F).
- With its high autolysis capacity this yeast will bring a very good roundness to wine.
- S. cerevisiae; x. bayanus.

**Application**: Suited for white (Semillon, Chardonnay), red (Cabernet Sauvignon, Merlot), rosé and sparkling wines.

**Packaging**: 500 g packet.

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

**25 g/hL.**

Enology Products – Fermentis Safoeno™ Yeast

**GV S107**
Latest release in the Fermentis yeast range, GV S107 brings roundness and high aromatic expression to premium white wines.
- Good alcohol tolerance (15%), slow fermenter (medium with pH=3.5) and medium nitrogen requirements.
- Wide fermentation temperature spectrum: 10 – 35° C (50 – 95° F).
- Strain adapted to high alcohol, full bodied whites, barrel aged on lees & undergoing malolactic fermentation.
- High production of esters. Balanced and clean, fruity and floral complexity with a long lasting finish and a very good mouthfeel.
- Also gently promotes terpene and C13-Norisoprenoids varieties.
- S. cerevisiae; x. cerevisiae.

**Application**: Selected for premium white wines. It is ideal for Chardonnay and recommended for Viognier, Chenin Blanc, Riesling, etc.

**Packaging**: 500 g package.

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

**25 g/hL.**

**CK S102**
Selected in the Loire Valley on Sauvignon blanc this strain is well suited to very intense aromatic whites and rosés.
- Very fast fermenter, alcohol tolerance up to 15% & strong nitrogen requirement to optimize the aromatic potential.
- Medium low VA, H2S and SO2 production with a well-adapted nutrition program.
- Strongly promotes fruity thiols and gently promotes terpenes. Very good ester production.
- Easy-2-Use™
- S. cerevisiae; x. cerevisiae.

**Application**: Suited for Sauvignon Blanc, Semillon, Chenin Blanc and rosé.

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

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

**25 g/hL.**

**UCLM S325**
Ideal for aromatic white wines, particularly those with terpene and C13 Norisoprenoids varietal aromas.
- Limited alcohol tolerance (13%) ideal for sweet wine, slow fermenter and high nitrogen demand.
- Low VA, H2S and SO2 and high glycerol production (10g/L).
- High beta-glycosidase activity on bound terpenes and C13 Norisoprenoids that leads to excellent organoleptic results of floral and citrus aromas.
- S. cerevisiae; x. cerevisiae.

**Application**: Suited for Muscat, Riesling, Pinot Gris, Gewurztraminer, Viognier and sweet wines.

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

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

**25 g/hL.**
## OUR RANGE OF ACTIVE DRY YEASTS

<table>
<thead>
<tr>
<th>CHOICE</th>
<th>TAXONOMY</th>
<th>WHITE</th>
<th>ROSE</th>
<th>SPARKLING</th>
<th>CANNABLE</th>
<th>USE RECOMMENDATION</th>
<th>BEST SUITED FOR</th>
<th>AROMAS</th>
<th>ROUNDESS</th>
<th>STRUCTURE</th>
<th>RECOMMENDED max ALCOHOL</th>
<th>NITROGEN requirement ( (\text{max recommended, range in ppm}) )</th>
<th>RECOMMENDED ( \text{TARIFFD} ) ( \text{temperature range} )</th>
<th>EASY \text{2 USE ?}</th>
<th>KINETICS</th>
<th>YEAST SETTLEMENT &amp; KILLER \text{factor}</th>
<th>SO2 production ( \text{as % of yeast mass} )</th>
<th>VOLATILE ACIDITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sellier\textsuperscript{C} 5125</td>
<td>Hybrid</td>
<td>S. Cavaile &amp; S. Bayanus</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>For premium reds with full body and fruitiness. Can be used as an inoculant for balanced high alcohol ferments with short to medium aging release time. Ideal for fruit driven wines such as Merlot, Cab Sauv, Cab Franc, Syrah, Grenache, etc.</td>
<td>Your fresh, fruity and smooth red wine</td>
<td>High intensity, Red &amp; black fruit aromas</td>
<td>High roundness</td>
<td>Medium high structure</td>
<td>&gt;15%</td>
<td>Low ( (140-210\text{ppm}) )</td>
<td>Ratio: 0.7-0.8</td>
<td>14.5°C ( (57-59°F) )</td>
<td>Fast</td>
<td>Neutral and good settlement</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} 5062</td>
<td>Hybrid</td>
<td>S. Cavaile &amp; S. Bayanus</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>Excellent polyphenol extraction that favors long aging conditions and elegance for premium reds in respect of their cultivars. Also brings structure, color and fruit intensity to young wines. Your red wine requiring structural enhancement</td>
<td>Medium intensity and water production, Fresh fruit &amp; spicy</td>
<td>Medium low structure</td>
<td>Medium high structure</td>
<td>&gt;15%</td>
<td>Low ( (160-220\text{ppm}) )</td>
<td>Ratio: 0.7-0.8</td>
<td>14.5°C ( (57-59°F) )</td>
<td>Fast</td>
<td>Killer and good settlement</td>
<td>Low</td>
<td>Medium</td>
<td>Medium low</td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} ULUH 9377</td>
<td>S. Cavaile</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>For premium, structured and long aging red wines: Cab Sauv, Syrah, Zinfandel... Adapted to long maceration wines (&gt;30 days) because of low kinetic allowing to elaborate finely structured wine. Also adapted to Mediterranean style varietals: Malbec, Tempranillo, Grenache.</td>
<td>Your long aging and fruity red wine</td>
<td>High intensity and ester production, Dry &amp; jammy fruits</td>
<td>Medium high roundness</td>
<td>High structure</td>
<td>14.5%</td>
<td>Medium ( (100-180\text{ppm}) )</td>
<td>Ratio: 0.8-0.9</td>
<td>17-35°C ( (62-95°F) )</td>
<td>Very slow</td>
<td>Sensitive but good settlement</td>
<td>Low</td>
<td>Medium</td>
<td>Very low</td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} STG 5101</td>
<td>S. Cavaile</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>Selected for its high water production, it is perfect for light and fruity reds and recommended for musts with cold pre-fermentation maceration. For primeus aged from acetic fermentation or thermostabilization as well as rosé (beauvire temperature): Pinot noir, Gamay, young Tempranillo, Sangiovese, Grenache.</td>
<td>Your primary red: Pinot noir, Grenache, Sangiovese...</td>
<td>High intensity, Ample, red fruit &amp; floral aromas</td>
<td>Medium low structure ( (reds) )</td>
<td>13.5%</td>
<td>Medium ( (80-160\text{ppm}) )</td>
<td>Ratio: 0.8-0.9</td>
<td>17-35°C ( (62-95°F) )</td>
<td>Slow</td>
<td>Neutral and good settlement at ( &gt;17°C )</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} NDA 21</td>
<td>S. Cavaile</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>The grape produces intense colored, harmonious, fruity &amp; spicy red wines with a short aging period. It brings roundness and excellent balance for Syrah, Zinfandel, Merlot that are appreciated in Mediterranean varieties like Mouvredre and Ner d’Ava.</td>
<td>Your spicy and fruity Syrah, Zinfandel, Mouvredre, Ner d’Ava...</td>
<td>Medium intensity, Fruity &amp; spicy notes</td>
<td>Medium structure</td>
<td>15%</td>
<td>Medium ( (180-200\text{ppm}) )</td>
<td>Ratio: 0.8-0.9</td>
<td>14-35°C ( (57-59°F) )</td>
<td>Medium</td>
<td>Neutral and good settlement</td>
<td>Medium</td>
<td>Very low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} CR 21</td>
<td>S. Cavaile</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>Respects varietal character, safe and regular fermentation. Adaptable to Bordeaux grape like Cab Sauv, Cab Franc &amp; Merlot. It is ideal for barrel fermentations without temperature control. Also good for enhancing fruitiness and roundness on whites and rosés at low temperature (Chenin blanc, Viognier).</td>
<td>Your Grand Cru, neat and clean ferment that values premium fruits</td>
<td>Medium intensity, Fresh fruit</td>
<td>Medium low structure ( (reds) )</td>
<td>15%</td>
<td>Low ( (150-220\text{ppm}) )</td>
<td>Ratio: 0.7-0.8</td>
<td>14-35°C ( (57-59°F) )</td>
<td>Medium</td>
<td>Sensitive but excellent settlement</td>
<td>Medium</td>
<td>Very low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} TR 46</td>
<td>S. Bayanus</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>Excellent fermentation characteristics and resistance to difficult winemaking conditions: Ideal for sparklings made with traditional method. Brings a good roundness to the wines and is also adapted to a wide range of premium reds and whites (Cab Sauv, Merlot, Carmenere, Barbaresco, Chardonnay, Semillons, Pinot gris,...).</td>
<td>Your traditional sparkling wine</td>
<td>Medium intensity, Promote of fruit complexity at low temperature</td>
<td>High roundness</td>
<td>Low structure ( (reds) )</td>
<td>15%</td>
<td>Very Low ( (10-150\text{ppm}) )</td>
<td>Ratio: 0.7-0.8</td>
<td>Wide range ( 10-30°C ) ( (50-86°F) )</td>
<td>Slow</td>
<td>Killer strain and good settlement</td>
<td>Medium plus</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} BC 5103</td>
<td>S. Bayanus</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>Great resistance for extreme winemaking conditions and stuck ferment: Adapted to all kinds of must even with high concentrations of SO2 or highly clarified. Enhances varietal characters. Recommended for high Brix reds, fresh and neat whites and for second ferment in tank.</td>
<td>Your extreme conditions fermentation: red, white, rosé and sparkling</td>
<td>Medium intensity, Promotion of thiols and terpene molecules at low temperature</td>
<td>Low roundness</td>
<td>Low structure ( (reds) )</td>
<td>15%</td>
<td>Very Low ( (150-300\text{ppm}) )</td>
<td>Ratio: 0.7-0.8</td>
<td>Wide range ( 10-30°C ) ( (50-86°F) )</td>
<td>Slow</td>
<td>Sensitive but excellent settlement</td>
<td>Medium low</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} OY 5107</td>
<td>S. Cavaile</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>New premium white wine strain that brings roundness and aromatic complexity. Adapted to high alcohol and full bodied whites, barrique aged on lees &amp; undergoing malolactic fermentation. Good for complex wines aged from elegant varietals like Chardonnay. Gently promotes aromatic varieties with floral and fresh fruit notes (Vioginer, Chenin, Riesling, Gewurtztraminer...).</td>
<td>Your extreme conditions fermentation: red, white, rosé and sparkling</td>
<td>Medium intensity, Promotion of thiols and terpene molecules at low temperature</td>
<td>Medium high roundness NO</td>
<td>Low structure ( (reds) )</td>
<td>15%</td>
<td>Medium ( (180-220\text{ppm}) )</td>
<td>Ratio: 0.8-0.9</td>
<td>Wide range ( 10-30°C ) ( (50-86°F) )</td>
<td>Slow</td>
<td>Neutral and good settlement</td>
<td>Medium low</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} CR 5102</td>
<td>S. Cavaile</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>Selected from the Vall de Lucs on Sauvignon blanc, this strain is suited for very intense aromatic whites and rosé. It specifically promotes fruity notes but also terpenes (Sauvignon Blanc, Riesling, Gewurtztraminer). Retarnted to difficult winemaking conditions, it also promotes neutral varieties thanks to a high ester production (Chardonnay, Viognier, Verdejo etc.).</td>
<td>Your Sauvignon blanc, Chardonnay and/or Pinot gris</td>
<td>High intensity, Thiol and terpenic releases ( (tropical, citrus) ) High production of ester, floral &amp; fruity</td>
<td>Medium high roundness NO</td>
<td>Low structure ( (reds) )</td>
<td>15%</td>
<td>Strong to avoid potential aromatic deviations ( &gt;220 \text{ppm} )</td>
<td>Ratio: 6-9</td>
<td>Wide range 10-35°C ( (50-95°F) )</td>
<td>Very fast</td>
<td>Killer and excellent settlement</td>
<td>Medium plus</td>
<td>Medium low</td>
<td></td>
</tr>
<tr>
<td>Sellier\textsuperscript{C} ULUH 5125</td>
<td>S. Cavaile</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>Ability to optimize white wine expression character. High beta-glucanase activity allowing terpenes &amp; C33 norisoprenoids ( \text{Michael, Riesling, Viognier, Gewurtztraminer, Pinot gris} ). Good results as well on aromatic whites (like Sauvignon blanc and Semilion) and ideally adapted to sweet wines ( \text{Marx} ) to low resistance to difficult fermentation conditions. Your Riesling, Chardonnay, Pinot gris and sweet wine</td>
<td>High intensity, Increase of aromatic potential of terpene aromatic varieties ( \text{floral, citrus} )</td>
<td>Medium roundness NO</td>
<td>11%</td>
<td>Strong ( \text{max plant.} )</td>
<td>Ratio: 6-9</td>
<td>17-35°C ( (62-95°F) )</td>
<td>Slow</td>
<td>Neutral and good settlement</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Premier Côte des Blancs
A slower fermenting, low foaming yeast, Premier Côte des Blancs produces wines characterized by fine, fruity aromatics.
- Alcohol tolerant to 14%, slow and regular fermenter even at low temperature (12–14°C).
- High nitrogen requirement to ensure the maintenance of fruity aromas.
- Derived from a selection at the Geisenheim Institute in Germany (Davis 750).
- This product was formally known as Côte des Blancs.
- *S. cerevisiae; x. cerevisiae.*

**Application:**
Suitable for residual sugar wines, light young reds and sparkling cuvée.

**Packaging:** 500 g packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.
25 g/hL.

Premier Rouge
Encourages the development of varietal fruit flavors balanced by complex aromas for full-bodied reds especially in Cabernet family varietals.
- Premier Rouge is a strong fermenter with a good alcohol tolerance to 15%.
- Controlled temperature preferred (keep the fermenting must below 30°C/86°F).
- Derived from the collection of the Institute Pasteur in Paris (Davis 904).
- This product was formally known as Pasteur Red.
- *S. cerevisiae; x. cerevisiae.*

**Application:**
Suited for red wines especially Cabernet Sauvignon and Cabernet Franc.

**Packaging:** 500 g packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.
25 g/hL.

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%.
- This yeast has low nitrogen requirement and a very low production of volatile acidity and acetaldehyde.
- Premier Classique has been derived from the collection of the University of California.
- This product was formally known as Montrachet.
- *S. cerevisiae; x. cerevisiae.*

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

Premier Blanc
This Saccharomyces bayanus strain is a strong fermenter and will readily ferment any type of grape musts and fruit juices to dryness.
- Excellent alcohol (18%) and SO2 tolerance & very fast fermentation.
- Very low nutrient requirements and very good fructophilic abilities.
- Very respectful of varietal character and balanced mouthfeel.
- Derived from a pure culture slant of the institute Pasteur in Paris (Davis 595).
- This product was formally known as Pasteur Blanc or Pasteur Champagne.
- *S. cerevisiae; x. bayanus.*

**Application:** Best suited for white, red and fruit wines.
**Packaging:** 500 g packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.
25 g/hL.

Premier Cuvée
Fast, neutral fermenter that is the most all-purpose yeast available.
- This yeast is particularly adapted to difficult fermentation conditions due to its high alcohol tolerance (16%) and low relative nitrogen requirements.
- Partly adapted to restart stuck or sluggish fermentations.
- Low producer of foam, urea, and fusel oils & good roundness.
- *S. cerevisiae; x. bayanus.*

**Application:** Suited for red and white varieties including Chardonnay, Sparkling Base, Merlot and Cabernet Sauvignon.
**Packaging:** 500 g packet and 10 kg box.
**Recommended Dosage:** 2 lb/1,000 gal.
25 g/hL.
Enology Products – Yeast Nutrients

### Fermentation Aids

<table>
<thead>
<tr>
<th>Choice</th>
<th>Nitrogen deficiency</th>
<th>Survival factor deficiency</th>
<th>Low turbidity</th>
<th>Sluggish fermentation</th>
<th>Restart a stuck fermentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>+++</td>
<td>SpringFerm™ Xtrem or SpringCell Complete (+DAP)</td>
<td>SpringCell</td>
<td>SpringCell + SpringFerm™ Xtrem/5044%DAP</td>
<td>SpringCell + SpringFerm™ Complete (+DAP)</td>
<td></td>
</tr>
<tr>
<td>++</td>
<td>SpringFerm™ (+DAP)</td>
<td>SpringCell Complete (+DAP)</td>
<td>SpringCell + SpringFerm™ Complete (+DAP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+</td>
<td>SpringFerm™ Complete</td>
<td>SpringFerm™ Complete (+DAP)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SpringFerm™

Fermentation activator made of partially autolyzed yeast, SpringFerm™ brings organic nitrogen (amino acids and small peptides), sterols, minerals & vitamins that are crucial for a complete fermentation.
- Recommended for must slightly deficient in nitrogen.
- Partially autolyzed yeast that is 3 times richer in available nitrogen than a basic inactivated yeast.
- 200 ppm of SpringFerm™ brings the equivalent of 10 ppm of Yeast Available Nitrogen.

**Application:** To be used at 1/3 fermentation and at inoculation for support role (lack of turbidity).

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

**Recommended Dosage:** 2 – 4 lb/1,000 gal depending on YAN. 25 – 50 g/L.

SpringFerm™ Xtrem

SpringFerm™ Xtrem is a fully yeast autolysate very rich in organic nitrogen specially designed for difficult fermentation conditions.
- Provides amino acids and small peptides, sterols, minerals & vitamins.
- Designed for deficient musts coming from overripe grapes that are often very poor in nitrogen (<150mg/L) and/or rich in fermentable sugars (potential alcohol >14%) which represent a favorable environment for stuck or sluggish fermentations.
- Fully autolyzed yeast, 9 times richer in available nitrogen than a basic inactivated yeast.
- 200 ppm of SpringFerm™ Xtrem brings the equivalent of 20 ppm of Yeast Available Nitrogen.
- Also recommended for production of organic wines where DAP cannot be used.

**Application:** To be used at 1/3 fermentation.

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

**Recommended Dosage:** 2 – 4 lb/1,000 gal. depending on YAN. 25 – 50 g/L.

SpringFerm™ Complete

This complex yeast nutrient is an all-in-one product that brings the perfect balance of organic and mineral nitrogen, sterols, detoxification power, minerals and vitamins to your ferment.
- Blend of yeast autolysate, yeast hulls, Thiamine and DAP to facilitate yeast nutrition operations.
- Decreases organoleptic deviation risks (volatile acidity, H2S) and helps the production of secondary alcohols and their esters.
- 200 ppm of SpringFerm™ Complete brings the equivalent of 17 ppm of Yeast Available Nitrogen.
- TTB Limit 3.0 lb/1,000 gal.

**Application:** To be used at yeast inoculation and/or at 1/3 of fermentation.

**Packaging:** 25 kg bag.

**Recommended Dosage:** 1 – 2 lb/1,000 gal. 10 – 35 g/L.

SpringCell

Natural yeast hulls are highly efficient as fermentation aids acting against sluggish and stuck fermentation.
- Rich in survival factors and strong detoxifying capabilities to improve yeast viability at the end of fermentation.
- To prevent stuck fermentations (PA>14%) or to clean stuck ferments prior to restarting.
- TTB Limit 6 lb/1,000 gal.

**Application:** To be used at 1/3 fermentation. At later stages, as a solution to sluggish or stuck ferments.

**Packaging:** 25 kg bag.

**Recommended Dosage:** 1 – 3 lb/1,000 gal. 10 – 35 g/L.

SpringCell BIO

An organic solution to sluggish and stuck fermentations. SpringCell BIO yeast hulls are issued from Saccharomyces cerevisiae yeasts specifically grown on organic certified substrate and processed accordingly to keep an organic certification.
- SpringCell BIO is used in prevention when:
  - The concentration in reducing sugars is important and the must is highly-clarified.
  - There is a need to preserve wine essence by limiting additions of nutrients, especially inorganic.
  - The only activator allowing to reach a total consumption of sugars in a must whose fermentation is slow, without producing volatile acidity.

**Application:** To be used at 1/3 fermentation. At later stages, as a solution to sluggish or stuck ferments.

**Packaging:** 500 g bag.

**Recommended Dosage:** 1 – 3 lb/1,000 gal. 10 – 35 g/L.

SpringCell BIO

An organic solution to sluggish and stuck fermentations. SpringCell BIO yeast hulls are issued from Saccharomyces cerevisiae yeasts specifically grown on organic certified substrate and processed accordingly to keep an organic certification.
- SpringCell BIO is used in prevention when:
  - The concentration in reducing sugars is important and the must is highly-clarified.
  - There is a need to preserve wine essence by limiting additions of nutrients, especially inorganic.
  - The only activator allowing to reach a total consumption of sugars in a must whose fermentation is slow, without producing volatile acidity.

**Application:** To be used at 1/3 fermentation. At later stages, as a solution to sluggish or stuck ferments.

**Packaging:** 500 g bag.

**Recommended Dosage:** 1 – 3 lb/1,000 gal. 10 – 35 g/L.

SpringFerm™ Complete

This complex yeast nutrient is an all-in-one product that brings the perfect balance of organic and mineral nitrogen, sterols, detoxification power, minerals and vitamins to your ferment.
- Blend of yeast autolysate, yeast hulls, Thiamine and DAP to facilitate yeast nutrition operations.
- Decreases organoleptic deviation risks (volatile acidity, H2S) and helps the production of secondary alcohols and their esters.
- 200 ppm of SpringFerm™ Complete brings the equivalent of 17 ppm of Yeast Available Nitrogen.
- TTB Limit 6 lb/1,000 gal.

**Application:** To be used at yeast inoculation and/or at 1/3 of fermentation.

**Packaging:** 25 kg bag.

**Recommended Dosage:** 1 – 2 lb/1,000 gal. 10 – 25 g/L.
**Enology Products – Yeast Nutrients**

**ViniLiquid**

Fermentis’ latest development in yeast nutrition, ViniLiquid is easy-to-use and highly-efficient.

- The innovative high density liquid format allows for easy, accurate dosing as well as immediate and complete integration in the juice/must.
- Total yeast autolysate providing organic nitrogen, sterols, minerals and vitamins.
- Provides greater fermentation power than the equivalent powdered nutrients.
- 50 ml/L of ViniLiquid brings the equivalent of 20 ppm of Yeast Available Nitrogen.
- Avoids inhalation of dust and safe to handle.

**Application:** To be used at 1/3 fermentation.

**Packaging:** 210 kg pumpable box and 12 kg jerrycans.

**Recommended Dosage:**
- 2 – 4 lb/1,000 gal.
- 25 – 50 ml/L.

**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 that allows for easy, accurate dosing and immediate and complete integration in the juice. With no dust or inhalation hazards ViniLiquid is safe to use!

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**Figure 1** shows the fermentation kinetic advantage of using ViniLiquid vs. DAP, DAP + O₂, O₂ + Yeast Derivatives + SpringCell, and O₂ + ViniLiquid.

Using ViniLiquid, fermentations came to a conclusion over 40% faster than DAP alone, and over 10% faster than equivalent yeast derivative/pure hulls when added in powder form.

**Residual Sugars at 238h of AF**

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.
**Enology Products – Yeast Nutrients**

**Fermo-Clean**
This complex yeast nutrient’s alpha cellulose 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 or rot conditions existed on incoming fruit.
- Contains many of the necessary nutritional needs of the yeast

**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 – 2.5 lb/1,000 gal.
10 – 40 g/hL.

**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.
- TTB Limit 2.5 lb/1,000 gal.

**Application:** Used as a rehydration product or 24 hours after fermentation has started and again at mid-fermentation if needed.

**Packaging:** 15 kg bag.
**Recommended Dosage:** 1 – 2.5 lb/1,000 gal.
10 – 40 g/hL.

**Thiamine Hydrochloride**
Yeast cells grow significantly faster as the result of enhanced utilization of mineral nitrogen in the presence of external sources of Thiamine.
- 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.

**Application:** Thiamine hydrochloride can be used 24 hours after the fermentation has started and again at mid-fermentation or later stages of fermentation if required.

**Packaging:** 20 kg carton. Available by special order only.

**Enology Products – Yeast-derived Functional Products**

**SpringArom®**
Inactivated yeast selected for its important reduction potential thanks to its high natural content in Glutathione, an antioxidant tripeptide naturally contained in yeast that prevents oxidation reactions and avoids organoleptic aging.
- Prevent browning and aroma loss in white wine.
- Keep the freshness and improve the mouthfeel.
- Also provides support for fermentation and acts as a light nutrient.

**Application:** To be added after settling and before inoculation for aromatic white wines such as Sauvignon Blanc, Gewurtztraminer, Chenin Blanc, Colombard, Riesling and rosé styles.

**Packaging:** 1 kg and 25 kg.
**Recommended Dosage:** 1.5 – 2.5 lb/1,000 gal.
20 – 30 g/hL.

**SpringCell Color**
Blend of inactivated yeast and yeast hulls rich in polysaccharides, SpringCell Color was specifically developed to act on the intensity and the stability of the color of red wines, with long term benefits.
- Polysaccharides help the stabilization of the tannin-anthocyanin complexes and reduces the level of free anthocyanins.
- Significant softening of the most astringent tannins due to the coating action of the polysaccharides on the green tannins. Improves the roundness of red wines.
- Supplies support, organic nitrogen and survival factors which are used by the yeast during fermentation.

**Application:** To be added before inoculation of red wines.

**Packaging:** 500 g packet and 10 kg box.
**Recommended Dosage:** 1.5 – 2.5 lb/1,000 gal.
20 – 30 g/hL.

**SpringCell Manno**
SpringCell Manno is a yeast polysaccharide product giving roundness and mouth-feel directly to the wine.
- Supplies mannoproteins and other polysaccharides, the noblest part of the lees, directly available to the wine.
- Recommended for barrel aged wines in addition or replacement of lees.
- Poly saccharides can coat the most astringent tannins to attenuate the hardness and bring roundness to the wine.

**Application:** Can be added during primary fermentation or the end of fermentation.

**Packaging:** 500 g and 10 kg packet.
**Recommended Dosage:** 1.5 – 2.5 lb/1,000 gal.
20 – 30 g/hL.
**Enology Products—Malolactic Bacteria and Nutrients**

**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 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-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 be also 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-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-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 varietals, 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-Depox**

Reduces by absorption toxins that are naturally present in the wine at the end of primary fermentation. Its use 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:** 500 g.

**Recommended Dosage:** 1.6 – 25 lb/1,000 gals.

**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:** 500 g.

**Recommended Dosage:** 0.8 – 2.1 lb/1,000 gals.
Foraging bears, coyotes, deer and birds all covet the frozen fruit.

**CANADA** is one of the newest, and smallest, wine regions in the world and yet its ice wine is sought after by connoisseurs everywhere. Ice wine is produced from grapes that have been frozen while still on the vine. The grapes have to be picked almost immediately or the harvest is lost. Therefore, producing it is a risky business. Sub-zero temperatures and wild animals make it difficult for pickers. That's why very little ice wine is produced.

**Cellar Supplies**

- Chemicals .................................. 34
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- Cleaning and Sanitation ................... 48
Ascorbic Acid

Ascorbic Acid is a powerful anti-oxidant. It can be added to wine at bottling to help protect color from oxidizing and reduce the chances of browning and spoilage.

- Consumes any free oxygen that may be present in wine at bottling.
- Effects are stronger and longer lasting when used in combination with Potassium Metabisulfite.
- To be used with adequate free SO2 present so that any free H2O2 is removed.
- Must be used with caution and can react with oxygen to produce hydrogen peroxide.

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

Packaging:
25 kg carton.

Bentonite KWK

Bentonite is a great general-purpose fining agent that is easy to prepare and does not adversely affect wine flavor.

- Used for the removal of unstable proteins in wine and juice.
- Negatively charged clay colloid that reacts with positively charged proteins, precipitating them from the wine.
- KWK Bentonite is a fine granular sodium bentonite with an average particle size between 20 and 70 mesh.

Application:
At any stage during the winemaking process.

Packaging:
50 lb bag.

Bentonite KWK Krystal Klear

Bentonite KWK Krystal Klear has superior adsorption and clarifying characteristics for use in the clarification of wine, juice or cider.

- Attracts positively charged particles to help settle out proteins that can lead to cloudiness in the bottle.
- Used for the removal of unstable proteins in wine and juice.
- KWK Krystal Klear is a negatively charged clay colloid and reacts with positively charged proteins, precipitating them from the wine.
- Can be rehydrated in either hot or cold water at any stage.

Application:
At any stage during the winemaking process.

Packaging:
50 lb bag.

Activated Carbon

ATPGGroup offers a wide variety of carbons for all your application needs. In wine and juice production activated carbons are often used to remove unwanted taste, odors, haze, color as well as Patulin removal (apple juice).

- When selecting the correct carbon for a given application you should also take into account the raw material, particle size and production method used to produce a given product to improve quality and minimize problems in the production process.

Application:
Can be added at any stage during winemaking process.

Packaging:
(Deodorizing) 44 lb bag; (Decolorizing) 40 lb bag.

Cellar Supplies – Chemicals

Bentonite Preparation

Bentonite is hydrated aluminum silicate clay with negative charges. It is added to remove positively charged proteins in wine that affect protein (heat) stability.

Bentonite KWK Procedure
1. For small amounts (less than 20 lbs), prepare in 5 gallon buckets, otherwise use 100 gallon mixing tank or larger tanks with adequate mixing capabilities.
2. Use 1.5 gallons of 100 – 120° F water per 1 lb of Bentonite. (For a 6% solution use 1.5 gallons of water per 1 lb of Bentonite.)
3. Prepare slurry by slowly adding Bentonite to the hot water while mixing.
4. Avoid making lumps.
5. Let Bentonite hydrate for at least 12 – 24 hours before adding to wine.

The slurry is slowly dosed into the wine while tank is mixing. Use an air pump and 3/4” hose to pump to top of tanks or add using Venturi Method. Stir tanks with a Guth and/or pump.

No legal limits on bentonites aside from water restrictions (which is 1% of the wine). Bentonite may be made in advance and stored depending on conditions of storage. Ideally do not keep unused Bentonite slurry for more than 2 weeks, it absorbs odors and can become mouldy. This is something which can be monitored visually and organoleptically.

Recommended Trial Rates

Prepare a 6% Bentonite Solution to perform trials.

<table>
<thead>
<tr>
<th>Wine Sample (mL)</th>
<th>Sol. %</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>0.4</td>
<td>18/K</td>
</tr>
<tr>
<td>200</td>
<td>0.8</td>
<td>22/K</td>
</tr>
<tr>
<td>200</td>
<td>1.2</td>
<td>36/K</td>
</tr>
<tr>
<td>200</td>
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<td>48/K</td>
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<td>2</td>
<td>52/K</td>
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<tr>
<td>200</td>
<td>2.4</td>
<td>68/K</td>
</tr>
<tr>
<td>200</td>
<td>2.8</td>
<td>72/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.
**Cellar Supplies – Chemicals**

**Citric Acid**
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 note on the palate.
- Should always be added to finished wines and never to unfermented grape juice, because it can be converted in acetic acid by the action of yeast, resulting in a wine with excess volatile acidity.
- Neutralizes with an acid rinse. (0.3% w/w citric acid solution.)
- Used for the removal of unstable proteins in wine and juice.

**Application:** Usually added prior to bottling.
**Packaging:** 25 kg (Domestic) and 50 lb bag (Imported).

**Cream of Tartar**
ATP Group 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.

**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.
- Stimulates yeast growth and fermentation activity.
- Helps 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.
- We also recommend an addition of organic nitrogen sources (SpringFerm™) for its vitamins and minerals.
- Readily soluble in water and can be added directly or as aqueous solution.

**Application:** Added at beginning of fermentation and again at mid-point if needed.
**Packaging:** 25 kg bag and 50 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**
Polyclar PVPP-V is a highly effective 100% PVPP wine stabilizer with an average particle size of 25 microns.
- Optimized for maximum, fast-acting reduction of polyphenols, such as the leucoanthocyanidins and catechins that may cause “pinking” and “browning” through oxidative polymerization.

**Application:** To be added at any stage of the winemaking process.
**Packaging:** 44 lb drum.

**PVPP-VT – Polyclar VT**
Polyclar 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.

**Application:** To be added at any stage of the winemaking process.
**Packaging:** 44 lb drum.

**Malic Acid**
Malic acid is one of the two main acids found in grapes and is used to adjust acidity when the winemaker prefers its sensory contribution to a particular wine style.
- The decrease in pH will not be as great as with the use of tartaric acid.

**Application:** Can be added at any stage of the winemaking process.
**Packaging:** 25 kg and 50 lb bag.

**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 used 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.
Cellar Supplies – Chemicals

Potassium Carbonate
Used for the decalification 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: Can be added at any stage of the winemaking process.
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.

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-hexadienoate.
Application: Should be added just prior to bottling.
Packaging: 50 lb box.

Cellar Supplies – Chemicals

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.
- Inhibitor system is designed to protect brass, copper, solder, steel, cast iron, aluminum and other metals commonly found in industrial cooling and heating systems.
- 96% Propylene Glycol.
- Other names: Propane-1,2-diol; 1,2-Propanediol.
Application: Contact ATPGroup Sales Representative for recommended dilution rates.
Packaging: 55 gal drum.

Bio-Cool Inhibited Propanediol
Bio-Cool is a high-performing, food-safe alternative to conventional glycols for low-temperature head-transfer applications in white, beer and food industries.
- USDA BioPreferred® designation.
- Made from renewable plant-based source, green technology.
- Saves 10% – 12% on energy costs over traditional propylene glycol.
- Reduces wear and tear on cooling equipment.
Application: For use in low-temperature heat-transfer applications in chillers to replace or use with propylene glycol.
Packaging: 55 gal drum.

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.
Application: At any stage during the winemaking process, especially prior to bottling.
Packaging: 25 kg bag.

Tartaric Acid USP / FCC
From a winemaking perspective, tartaric acid levels play a vital role in making wine. It increases color intensity and hue, improves flavor profile and enhances aging potential. Tartaric acid inhibits reactions associated with oxidation/microbial spoilage.
- ATPGroup is a world leader in providing highest-quality tartaric acid to food and beverage industries.
- 100% derived from grapes.
- 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: 25 kg bag and 1,000 kg super-sack.
Cellar Supplies – Filtration Aids

Diatomaceous Earth (DE)
Diatomaceous earth (DE), Celatone, 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 material 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.
**Packaging:** 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 crystalline 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.

Transcend Filtration Media
Transcend is a revolutionary patented diatomaceous earth filtration media that is crystalline silica free. In addition to the safety benefits, Transcend has the same great filtration capacity as standard DE and is easier to use than Perlite, with longer run times, increased throughput and decreased wine losses.

**Packaging:** 50 lb bag.

Cellar Supplies – Filtration Aids

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 lees 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.

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.

Notes

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BECOPAD® Depth Filter Sheets

BECOPAD 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 BECOPAD depth filter sheet.

Specific advantages of the BECOPAD Depth 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.

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 through-puts.
- 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.

*Conditions:

- \( \Delta p \rightarrow 100 \text{kPa} \) (1 bar), medium; water at 20°C (68°F)
**Cellar Supplies – Filtration Aids**

**BECO® Stacked Disc Cartridge Housings**

Eaton’s stacked disc cartridge housings are enclosed filter housing consisting of a bottom part with 3 feet and a detachable housing dome. The bottom part with inlet and outlet piece contains the centering and mounting unit for the stacked disc cartridge with a flat adapter or double O-ring adapter.

**BECO Integra® Disc 12”**
- Eaton’s stacked disc cartridge housing for holding 1–4 disc cartridges with a filter area of up to 15.6 m².

**BECO Integra® Disc 16”**
- Cartridge housing for holding 1-4 stacked disc cartridges with a maximum filter area of 8 m². Eaton’s stacked disc cartridge housing BECO Integra® Disc 16’ are also available as multi-column version for holding stacked disc cartridges with a maximum filter area of 93.6 m².

**BECO Integra® Disc S Range**

Special Features:
- High chemical resistance through the use of quality stainless steel materials, AISI 316 L / AISI 316 Ti.
- Easy handling and good clean-ability thanks to ergonomic design.
- Quick and simple replacement of the empty stacked disc cartridges.
- Low capital costs with relatively large filter areas and simple integration into the process.
- Variable application options through the use of different stacked disc cartridges with flat adapter or double O-ring adapter.
- Adaptation of the filter area to the respective requirements through variable column height.
- Small footprint through compact design and easy integration into the filtration process.
- Other designs and further components for expansion to complete systems are available, depending on requirements.

**BECO Integra® Disc I Range**

Special Features:
- High corrosion resistance through the use of stainless steel ASI 316 L.
- Simple handling through ergonomic design.
- Quick and simple replacement.
- Low capital costs with relatively large filter areas and easy integration into the process.
- Variable application options by implementing various BECODISC® stacked disc cartridge models.
- Adaptation of the filter area to specific requirements through variable column heights.
- Small footprint through compact design and easy integration into the filtration process.
- Available 12”.

Applications: Depending on the filtration task, BECODISC stacked disc cartridges are used for coarse, clarification, fine filtration, microbe reduction and microbe removal.

**BECO Integra® Disc P Range**

Special Features:
- CIP/SIP cleaning in the enclosed system without stacked disc cartridge possible.
- Complete emptying through specially designed stacked disc cartridge housing.
- Easy handling thanks to v-clamp closure for 12’ and 16’ stacked disc cartridge housings.
- Low capital costs with relatively large filter areas and simple integration into the process.
- Variable application options through the use of different stacked disc cartridges with flat or double O-ring adapter.
- Adaptation of the filter area to the respective requirements through variable column height.
- Small footprint through compact design and easy integration into the filtration process.
- Available 12” or 16”.

The design and construction of Eaton’s BECO Integra Disc P complies with the requirements of the cGMP guidelines and the FDA regulations. Other designs and further components for expansion to complete systems are available, depending on requirements.
**Cellar Supplies – Filtration Aids**

**BECO® Stacked Disc Cartridges**

The individual cartridge cells are made up using BECO depth filter sheets and the outer edge of two of these depth filters, whose outlet side is in contact with a drainage plate, is coated with polypropylene and sealed. Depending on the cartridge type, a different number of stacked filter cells forms a cartridge unit, which is safely held together by the three-part segmented sleeve made from stainless steel. Sealing between the filter cells is via accurately fitting intermediate profile rings. When installed, the segmented sleeve made from stainless steel ensures excellent mechanical sealing of the module. The occurrence of bypass effects is therefore eliminated.

**BECODISC®**

Mineral-free depth filtration stacked disc cartridges for a wide range of applications, including coarse and sterile filtration of all liquid media.

**BECODISC® BA**

Stacked disc cartridges are used for the demanding filtration of high quality spirits such as cognac, armagnac, barrel-matured brandy and whisky. The product range is graded from coarse particle separation to fine filtration and enables accurate adaptation to the requirements of spirit filtration.

**BECODISC® BS**

Eaton’s BECODISC BS stacked disc cartridges were developed to meet the exacting requirements in the filtration of liquids.

**BECODISC® BT**

Eaton’s BECODISC BT stacked disc cartridges is optimized for the filtration of highly viscous liquids with particles of coarse, crystalline, amorphous or gel-like structure and are mainly used in the chemical, cosmetics, and food industries.

**BECODISC® P**

New, cationic, mineral-free depth filter medium for applications ranging from particle to microbe removal in the pharmaceutical industry.

**BECODISC® BP**

Eaton’s BECODISC BP stacked disc cartridges meets the exacting requirements of the pharmaceutical industry (e.g. for the filtration of fermenter broth).

**Cellar Supplies – Filtration Aids**

**BECO® MEMBRAN PS Wine Cartridges**

Winemakers give special attention to the color and flavor of their wines. Filtering wine is an important step in the final stages of wine and sparkling wine. To ensure microbial stable and flavorful wine. Eaton’s BECO MEMBRAN PS Wine membrane filter cartridges are designed specifically for reliable removal of spoilage microorganisms of wine and sparkling wine.

BECO MEMBRAN PS Wine filter cartridge are made of high-quality polyethersulfone membranes that perfectly combine long service life with full maintenance of valuable flavor and color of premium wines.

**Characteristics and Advantages:**

- The asymmetric polyethersulfone membrane provides high microbiological retention and can be integrity tested.
- The high filter area and asymmetric membrane structure of polyethersulfone offers exceptionally high flow rates and outstanding service life.
- The special design allows for 72.5 psi (5 bar) differential pressure in the direction of flow and 29 psi (2 bar) differential pressure in reverse to support a long service life.
- The high thermal stability allows more than 100 steam sterilization cycles.
- Available in 0.45 and 0.65 µm, code 2 and 7 and length of 20” (500 mm) and 30” (750 mm). For other dimensions and retention ratings it can be perfectly complemented by BECO MEMBRAN PS Pure Range.
- Full maintenance of valuable flavor and color in wines.
- Eaton can suggest the most economical configuration of pre and final filter.

**BECO PROTECT® FS**

BECO PROTECT FS FineStream depth filter cartridges are innovative cartridges with unique design that increases the filter area. The variable flow of the BECO PROTECT FS depth filter cartridge is also unique. This can be adjusted to flow from outside to inside or, if the inlet and outlet ends on the housing are reversed, from inside to outside. The filtering effect remains the same.

**Features and Benefits:**

- High retention for a reliable separation effect, \( \beta \geq 5000 \) or \( \geq 99.98\% \) efficiency for defined particles
- Outstanding protection for subsequent membrane filtration thanks to fine, newly filter material (by 0.2 \( \mu \)m - Type) and thus an increased membrane filter cartridge service life.
- The larger filter area gives a greater filter performance
- Variable flow
- Minimum product loss with flow from inside to outside
- Backwashable up to 29 psig (200 kPa, 2 bar) at 176°F (80 °C)
- High chemical resistance by using 100% polypropylene
Acid Blend
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 Low Foam
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.

Caustic Cleaner CIP
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.
*Application: 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.

Foaming Acid Cleaner
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.

Super Foamer
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.

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.
*Application: Consult ATPGroup sales representative for specific application instructions.
*Packaging: 55 gal drum and mini-bulk.
(See wash procedure instructions on page 53.)

Calcium Hypochlorite
Widely used for water treatment and as a bleaching agent. It 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.

**Blended Acid Cleaner**
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.

**Foaming 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 bio film formation.
- Other names: PAA, Peroxyacetic Acid.

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

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

**Causticlean Powder**
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.
- Blinds 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 Sanitizer**
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.
Cellar Supplies – Cleaning and Sanitation

Casticlean Powder Plus
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.

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.
- Available in either chlorinated or non-chlorinated bags.
Application: Consult ATPGroup sales representative for more information.
Packaging: 25 kg bag.

Oxy Bleach Low Foam
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.
- Safer to use than traditional caustic cleaners.
Application: Consult ATPGroup sales representative for more information.
Packaging: 50 lb and 350 lb containers.

Cellar Supplies – Cleaning and Sanitation

Application for Caustic Liquid Cleaners

<table>
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<tr>
<th>TANK SIZE (GALLONS)</th>
<th>WATER (GALLONS)</th>
<th>STANDARD WASH</th>
<th>MEDIUM WASH</th>
<th>EXTRA DIRTY WASH</th>
<th>SODIUM PERCARBONATE (LBS)</th>
<th>CITRIC ACID (LBS)</th>
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Wash Procedure
1. Remove heavy soil.
2. Pre rinse with water until water is clear.
3. Add required amount of water (enough to keep pump running).
4. Add required amount of caustic liquid cleaner and add Sodium Percarbonate, if necessary.
   Circulate for 30 minutes to 1 hour. Consult ATPGroup Sales Representative for more information.
5. Rinse with WATER — 2 to 3 minutes or until pH paper reads neutral.
6. OPTIONAL: Quick citric acid rinse — 5 to 10 minutes.
7. WATER rinse — 1 to 2 minutes.
   - If tank has heavy soil or is stained, add Sodium Percarbonate (Provox) to the wash solution per chart.
   - If tank requires 2nd wash, use 1/2 the amount of caustic liquid cleaner plus add Sodium Percarbonate to the wash.
OREGON has a reputation for making quality wines, though growing grapes here can be quite nerve-wracking. Sunshine and heat tend to come in short-supply and the threat of rain is always present. Yet, it’s these same conditions that contribute to the wineries in Oregon producing what many wine aficionados think are world-class Pinot Noir and Pinot Gris wines.

Winemaking Services and Reference Guides

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Winemaking Services

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 simply, just an opinion
Winemaking Services – Reference Guides

Evaluate Your Nutrient Requirements

- Total amount of YAN needed in mg/L: concentration of sugar (g/L) x Ratio for selected yeast (mg/g).
- If this calculation gives a value < minimum N required for the yeast, adjust to the minimum required, referring to the yeast information table.
- Evaluate the YAN to be added = Total YAN needed - initial YAN must.
- Identify your fermentation nutrition strategy from the scenarios in the following table:

<table>
<thead>
<tr>
<th>YAN to be added (mg/L)</th>
<th>Timing of Addition</th>
<th>At yeast inoculation</th>
<th>At 35 – 45% Brix reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;40 ppm of YAN</td>
<td>Red Wine: SpringCell Color</td>
<td>0</td>
<td>SpringFerm™</td>
</tr>
<tr>
<td>&gt;40 ppm of YAN</td>
<td>White wines: (Aromatic whites) or SpringFerm™ (other)</td>
<td>½ YAN needs to DAP</td>
<td>½ YAN needs SpringFerm™ Xtrem or ViniLiquid, DAP if needed or SpringCell if needed</td>
</tr>
</tbody>
</table>

Dose Calculation Instructions:
- Red wines: before inoculation add 30 g/L of SpringCell Color to enhance the stabilization of the color and improve the perception of roundness.
- White wines: before inoculation add 10 – 30 g/L of SpringArom (preferred for aromatic whites) or SpringFerm™ to improve turbidity or preserve aromas and prevent oxidation.
- YAN adjustment at yeast inoculation with DAP considering that 10g/L DAP supplies 20ppm of YAN.
- YAN adjustment at 35 – 45% of the sugar consumed. Calculate dosage based on 40g/L SpringFerm™, 20g/L SpringFerm™ Xtrem or 50mL/L ViniLiquid each supply 20ppm of YAN. If over 40ppm of YAN supply is needed, supplement with DAP.
- Add 20 g/L of SpringCell during the second YAN adjustment if the potential alcohol (PA) is >14% (23°Bx).

Addition Calculation Example:
Must at 25 Bx = 280g/L sugar, initial YAN = 120 mg/L, PA: 14.5%. Yeast: HD S135
- YAN needed: 0.7° x 280 = 200ppm. Minimum required 160 ppm. Ok. YAN needed: 80ppm.
- Amount of YAN to be added at yeast inoculation: ½ x (200-120) = 40ppm; i.e. 40/2 = 20g/L DAP.
- Amount of YAN to be added at 35 – 45% of the sugar consumed: ½ x (200-120) = 40ppm, i.e. 40g/L SpringFerm™ Xtrem or 100mL/L of ViniLiquid.
- SpringCell at 35 – 40% sugar consumed: 20g/L.

Please Note: All products recommended by Fermentis are fully authorized per 27 CFR 24.246 prior to and during fermentation. Dosage limits may apply. Information contained in this protocol is considered accurate to the best of our knowledge at the time of revision.

Please contact your product specialist for more information.

Winemaking Services – Reference Guides

Rehydration of Yeast

The steps below are a general outline for rehydrating yeast. Please also check the yeast manufacturer’s recommendations and protocols.

Dosage Rate
- Determine the total volume of juice/must to be inoculated.
- 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 for still wine is typically 2 lbs/1,000 gallons (or 20g/hl).

Easy 2 use Yeasts:
The result of Fermentis’ experience and expertise in the production and the drying of yeast and yeast derivatives. easy 2 use is a range of yeasts, nutrients and functional products that are designed to facilitate fermentation operations and save time during harvest. Our easy 2 use yeast strains have been intensively tested to ensure viability, fermentation abilities and organoleptic profile uniformity with all types of rehydration procedures (normal rehydration, cold or hot water and direct inoculation in the must).
With the easy 2 use yeasts winemakers can choose the condition that best suits their needs:
- With prior rehydration:
Pour the yeast on the surface of a least 10 times its weight of (chlorine free) tap water at room temperature. Gently stir to avoid or break up clumps. Wait 20 minutes and transfer to the tank while mixing (pump over with aeration for reds).
- Direct inoculation:
Pour the yeast on the surface of at least 10 times its weight of must. Gently stir to avoid or break up clumps. Immediately transfer to the tank during a pumping over with aeration (or homogenize tank volume). For whites, rosés and Flash Détente treated reds fermented in juice phase the yeast can be added directly to the top of the tank while mixing gently.
Conventional Yeast Rehydration:
- Gently pour the desired quantity of yeast into 10 times its weight of chlorine free tap water at 30 – 35°C in a wide vessel. Cover all the water surface area by creating a thin layer of yeast.
- Let rest for 20 minutes.
- Gently stir to complete the yeast rehydration and avoid the formation of clumps.
- Slowly double the volume of the yeast suspension by adding must from the tank while stirring in order to decrease the temperature of the yeast starter and to start the activation of the yeast.
- Let rest for another 10 minutes.
- Homogenize and incorporate the yeast starter to the must during a pumping over with aeration.
Winemaking Services – Reference Guides

Restarting a Stuck Fermentation

Step-by-step recommendation for the treatment of 1,000 gallons of wine at 12% vol. (20.7° Brix) with residual sugar.

Treatment of the stuck wine
Recommended treatment of the wine prior to inoculation of the yeast starter:

Objective: Remove any toxic byproducts.

- Rack the wine (with aeration if red wine) off the lees (press reds if still on skins)
- Add 25 – 35ppm SO2 & 0.8 lb/1000 gal of Lysozyme (Vin-Lyso).
- Add 3 lb/1,000 gal of yeast hulls (SpringCell) and 8.3 lb/1,000 gal of cellulose if possible.
- Mix gently and wait for 1 – 2 days.
- Rack (or filter if more practical) under a carbon dioxide or argon layer to avoid oxidation and wait for the preparation of the yeast starter.
- Add 1.7 lb/1,000 gal of Bioferm + 1.7 lb/1,000 gal of DAP just prior to inoculation of yeast starter.

Preparation of a yeast starter

Rehydration procedure: Follow the instructions on the data sheet, use chlorine-free water at 98°F.

Dosage of BC S103 yeasts:

<table>
<thead>
<tr>
<th>BRIX REMAINING</th>
<th>DOSAGE (LB/1,000 GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;3</td>
<td>2.5</td>
</tr>
<tr>
<td>&lt;3</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Gentle stirring.
Wait 20 minutes.

Winemaking Services – Reference Guides

Restarting a Stuck Fermentation

Yeast starter (Maintain constant temperature between 68 – 77°F)
Add to the 3 gallons of the rehydrated yeasts:

- 2 gal of stuck wine treated per above protocol (but before addition of activator).
- 4 gal of chlorine free water at 77– 86°F.
- 8.3 lb of sugar (or equivalent amount with concentrated grape juice).
- 0.05 lb of Bioferm Complete or 0.025 lb Bioferm + 0.025 lb DAP.
- Measure initial °Brix.
- Wait for 40% of the sugars (or °Brix) to be consumed.

Acclimatizing stages (68 – 77°F)

First step: 50 gallons
Add to the yeast starter:

- 10 gal of the previous solution.
- 26 gal of stuck wine.
- 12 gal of chlorine-free water at 68 – 77°F.
- 16.6 lb of sugar (or equivalent amount with concentrated grape juice).
- 0.25 lb of SpringFerm™ Complete or 0.125 lb SpringFerm™ + 0.125 lb DAP.
- Measure initial °Brix.
- Maintain at 68 – 77°F.
- Wait for 40% of the sugars (or °Brix) to be consumed.

Second Step: 100 gallons
Add to the previous 50 gallons:

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

Inoculation of the yeast starter

Inoculate the yeast starter into the already treated stuck wine during a pumping over with aeration (T=68°F).
Addition Volumes for Trials Using a 5% Solution

<table>
<thead>
<tr>
<th>DOSAGE ppm lbs/1,000 gal</th>
<th>SAMPLE VOLUME, mL</th>
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<tr>
<td></td>
<td>250</td>
</tr>
<tr>
<td>10</td>
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<tr>
<td>20</td>
<td>0.17</td>
</tr>
<tr>
<td>30</td>
<td>0.25</td>
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<tr>
<td>40</td>
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<tr>
<td>60</td>
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<tr>
<td>70</td>
<td>0.58</td>
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<tr>
<td>80</td>
<td>0.67</td>
</tr>
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<td>90</td>
<td>0.75</td>
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<td>200</td>
<td>1.67</td>
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<tr>
<td>300</td>
<td>2.50</td>
</tr>
<tr>
<td>400</td>
<td>3.34</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. (100ppm = 0.100g/L = 0.834 lbs/1,000 gals.) Other dosage rates can be calculated using this formula:

Volume of solution in mL = (Desired dosage in ppm) x (Volume of wine sample in mL) / (Concentration of solution in ppm)

Winemaking Services – Reference Guides

Addition Volumes for Trials Using a 5% Solution

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

Time Period | Action | Oak Alternative
---|---|---
**Before Harvest** | Definition of wine profile | -
**Before alcoholic fermentation (AF)** | Introduction of Oak, pumpable size | -
**During AF** | MOX at 18-19 Brix, 10mg/l in 6-12hrs | -
**After AF** | Selecting good candidates for aging | Clari fica tion
**After MLF** | Continuous of MLF, Phase 2 | Introduction of toasted oak (Contact for 2 weeks to 6 months)
**Before bottling** | Macro-dose if needed against reduction | Final touch (chips, powder or shavings)

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 on 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.

(Continued on next page)
WASHINGTON is the second-largest wine-producing state in the country. Most grapes are grown in the eastern half of the state, east of the Cascade range. The Cascades keep most of the rain out, the majority falling to the west. What else makes it such a good wine-producing state? Washington gets 2 more hours of sunshine per day than California. This April, ATPGroup opened a warehouse in Grandview to better serve the state and the entire Pacific Northwest.
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 Applied Technologies and Process Division (ATPD).

The mission of ATPD 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 ATPD 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 Applied Technologies and Process Division.

• ATPD 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 ATPD organization offers science-driven innovation and history of problem solving success to address your particular need or situation.

• ATPD 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 to help you make what you make better.
Summer in Pennsylvania and breezes are blowing in from Lake Erie.

PENNSYLVANIA is the 8th largest wine-producing state in the country. William Penn himself supposedly planted the first vineyard in Philadelphia. Today, wineries can be found all over the state. (They boast that every resident is no farther than an hour away from a winery.) But wine in Pennsylvania? Surprisingly, the climate in the state is mild compared to surrounding states due to its proximity to Lake Erie to the north and the Atlantic Ocean to the east.

Equipment

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Equipment – Filtration

**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.
- Winner 2017 Innovation + Quality Product Award.

Equipment – Filtration

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

The Padovan Cross-Flow Nitor SMART Filter 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.
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 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 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.

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.
Equipment–Centrifuges

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.

Equipment–Presses

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.
The Siprem PCM Continuous Membrane Press provides unsurpassable performance made possible by a 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’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.
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.

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 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.

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.
Equipment – Replacement Membranes

C.E. Bartlett Wine Press Membranes are acknowledged as the best after-market press bladder membrane in the wine industry. Bartlett has an excellent reputation as a manufacturer of high quality replacement membranes for European presses, where they meet and in most cases, exceed the original manufacturers specifications.

Bartlett’s 50 years of experience in fabric conversion by using only the most technically correct manufacturing methods, ensuring that attention to known stress and wear areas is addressed without compromise to the all-important flexibility of the membrane.

Bartlett Press Membranes are only available in the United States through ATPGroup.

• Membranes are available for all makes and models of wine presses.
• Unique 3-year warranty.
• Longtime supplier to the U.S. wine market.

Equipment – Red Hunter Thermovinification Unit

Continuous vinification line for the production of red, rosé and deep red wines with a superior alcohol content and a constant quality.

Advantages:
• High coloring intensity, due to the optimal combination of the time, temperature, holding and leaching parameters.
• Color stability, guaranteed for a long time.
• Less than 30 seconds to reach process temperature, due to steam generated by the must.
• Immediate destruction of the oxidative enzymes (tyrosinases, oxidases, laccases).
• Physical extraction of all the coloring pigments (anthocyanes).
• No extraction of dangerous tannic components since the seed lipidic membrane is not denatured by fermentation and alcohol.
• Possibility to obtain natural juices that do not contain sulfur dioxide and that are suitable for exportation.
• Feed and discharge are continuous and flexible. This is due to the diffuser, which works as a buffer tank and allows any variation of the crushing output.
• Reduction of running costs and less room is needed.

TMCI Padovan Red Hunter Thermovinification Unit
Equipment – Parsec

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

- Complete control of the entire wine-making process
- Control over entire refrigeration system
- Increased savings on power and energy usage
- Remote and wireless connectivity from anywhere
- Complete system traceability at your fingertips
- Humidity and temperature control throughout the winery
- System control from a single source- Parsec SAEn 5000

Equipment – Parsec

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.
- Quadri 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.
Equipment – Parsec

Parsec EVO 1000
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 carbonisation of wines (sparkling wine production).

Parsec OxyLevel 2200
For measuring dissolved oxygen, the OxyLevel 2200 is the most advanced device of its kind. It allows precise measurements and strictly adheres to all food standards. Using inline measurement and an alarm, oxygen contamination can be detected anywhere in your production line.
• Measurements can be taken directly in the tanks by using stainless steel extension and inside closed bottles by means of clear glass and dot technology.
• Probe is extremely accurate, measuring anything from 4 to 24,000 ppb.
• Automatically compensates for temperature variations and is not sensitive to other dissolved gases.

All ATPGroup Parsec products are equipped with the same Parsec technology

<table>
<thead>
<tr>
<th>Unit Name</th>
<th>Portable</th>
<th>Compact</th>
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<tbody>
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<td>Personalized</td>
</tr>
<tr>
<td>Compatible with bottle</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
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<td></td>
<td></td>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>External PC Connection</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>YES</td>
</tr>
<tr>
<td>Injection Modes (SI=Single injection)</td>
<td>3: Micron/ Macro/SI</td>
<td>3: Micron/ Macro/SI</td>
<td>3: Micron/ Macro/SI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3: Micron/ Macro/SI</td>
</tr>
<tr>
<td>1 Dosing Chamber/Diffuser</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td></td>
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<td>YES</td>
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<tr>
<td>Fractioned Injection</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>Monitoring (T, P, pCO2)**</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>Compensation of Variables</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
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<td></td>
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<td>YES</td>
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<tr>
<td>Stainless Steel Case</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
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<td></td>
<td>YES</td>
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<td>IP 65</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
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<tr>
<td></td>
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<td></td>
<td>YES</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>6</td>
<td>10</td>
<td>22/30</td>
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<tr>
<td></td>
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<td></td>
<td>NA</td>
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<tr>
<td>Dimensions (mm)</td>
<td>246x115x270</td>
<td>230x150x320</td>
<td>350x400x210</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Power Consumed</td>
<td>2/45</td>
<td>.2/45</td>
<td>.2/45</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>NA</td>
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<tr>
<td></td>
<td>50 – 60 Hz</td>
<td>50 – 60 Hz</td>
<td>50 – 60 Hz</td>
</tr>
<tr>
<td></td>
<td>.3A</td>
<td>.3A</td>
<td>.3A</td>
</tr>
</tbody>
</table>

Definitions
* Type of dosage: It can be standard or high dosage.
** Volume range: Indicates the suggested size of the tank in which to use it.
The CDR WineLab 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.

**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.

**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.
Equipment – Laboratory

Kits for CDR WineLab Analysis

These kits are pre-calibrated and come ready-to-use. These are pre-vialed, disposable reagents with low toxicity developed by the research laboratories of CDR.

Packaging:
- 10 single-use cuvettes per package.


table

<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</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>fructose in wine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Glucose and</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>fructose in</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>must, sparkling</td>
<td></td>
<td></td>
<td></td>
<td></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</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>Glucose</td>
<td>1 – 10 g/L</td>
<td>0.13 g/L</td>
<td>0.1 g/L</td>
<td>1 min</td>
</tr>
<tr>
<td>Glycerol</td>
<td>2 – 15 g/L</td>
<td>0.02 mg/L</td>
<td>0.1 g/L</td>
<td>6 min</td>
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<tr>
<td>Copper</td>
<td>0.05 – 1.00 mg/L</td>
<td>0.03 mg/L</td>
<td>0.1 g/L</td>
<td>5 min</td>
</tr>
<tr>
<td>Antocyanins</td>
<td>10 – 1,000 mg/L</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</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>
NEW YORK state’s wine production began in the 17th century in the Hudson Valley region with Dutch, French, and English immigrants planting vineyards. The area is still home to the oldest continuously operating winery in America. After the Civil War, the wine industry moved. Today, you will find most of New York’s wine production located around the Finger Lakes region, which now accounts for almost half the wineries in the state.
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 aides 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.
Thomas Jefferson was probably America’s first wine connoisseur. As ambassador to France, he fell in love with that country’s wine. Returning to America, he attempted to make the same wines in Virginia. Sadly, his attempts failed as the hot and humid summers made growing French varietals impossible. Today, thanks to the perseverance of growers, they are grown all over the state, including at Jefferson’s Monticello.
Our ATPGroup Applied 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 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 expensive downtime.
- 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 your equipment 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 Applied Technology Service and Maintenance Department of ATPGroup is your single service and solution provider.
Over 120 grape varieties are grown on the over half-million acres of California vineyards.

California accounts for nearly 90% of all American wine production. If it was a separate country, it would be the world’s fourth largest wine producer. You can find winemakers in almost every corner of the state - the North Coast (Napa, Sonoma, Mendocino), the Central Coast (Santa Barbara, Paso Robles), the Central Valley (including the Sierra Foothills) and the South Coast (south of Los Angeles to the Mexican border) - all making wines of every conceivable style.
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.
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.

---

Stölzle Glassware

**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.
**Champagne Flute**

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.

**Champagne Glass**

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.
Stölzle Glassware

Port and After Dinner

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

Decanters

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.

Port and After Dinner

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Tossware® Drink. Toss. Recycle.

- Tossware’s patented stacking feature lets you save space and makes it easier for you to carry more at a time. Take Tossware® wherever and whenever you need it — our drinking glasses and flutes are conveniently packaged in recyclable, grab and go sleeves. Plus the engineered shatterproof design keeps you worry-free of accidents that can happen with regular glass cups. Don’t stop the party to clean up broken glass! Knock it, hit it, squeeze it, drop it — doesn’t matter, it just won’t shatter!
- If that’s not enough, Tossware® looks like glass, with true crystal clarity. They hold cold beverages like glass, just without that breaking problem. Take them to the beach, the park, the baseball game, or that swanky party out by the pool. Classy, clear, eco-friendly and fun. Enjoy Tossware® anywhere.
- Did you know that Tossware® can be decorated? Yep print your logo, your name, a saying on the tumbler and make them ‘your own’. Minimums do apply, so check with us at ATPGroup and we will provide you with what is possible.
- Made from BPA-free Recycled PET Polymer.
- 100% recyclable.

Tossware® Drink. Toss. Recycle.

Your choice of removable stems:
Black, clear or white.

True crystal clarity and it’s not glass.

Knock it, hit it, squeeze it, drop it. It won’t shatter.
Bar Maid®

The GP-100 Polisher is:

- **EFFICIENT**... Polishing heads simultaneously polish glassware inside and out and are dried by the warm air of the blower.
- **GENTLE**... Soft microfiber twine material minimizes stress on glassware reducing potential for breakage.
- **SAVES TIME AND MONEY**... Polishes up to 350 glasses per hour saving hundreds in labor and minimizing costly glass breakage.
- **SANITARY**... Customers enjoy crystal clear glassware with minimal handling by staff.
- **PORTABLE**... Small footprint and lightweight. Built in handles for portability.

**SPECs**... 110v – 1350 watts; Weight = 38 lbs. Size = 20”H x 13”L x 11.5”W.

- A set of 5 polishing heads are included with the GP-100 Polisher, and heads are easily cleaned by hand or dish machine washable.

**Accessories available.**

- Glass Polisher Replacement Head Set of 5 – Item no. PH-5S.
- Champagne flute polishing head individual – Item no. GP-554.

Coravin™ allows you to pour a glass of wine without pulling the cork. With no oxidation, the remaining wine in the bottle will be preserved for weeks, months or even years.

**Coravin™**

- **Model Two Wine System**
  - Item No: 100010
  - Pack includes:
    - Model 2 System
    - 2 Argon Capsules
    - Coravin™ Wine Bottle Sleeve
    - Standard Needle
    - Needle Cleaning Tool

- **Model Two Plus Pack**
  - Item No: 100009
  - Pack includes:
    - Model 2 System
    - 2 Argon Capsules
    - Carry Case
    - Coravin™ Wine Bottle Sleeve
    - 3 Needle Kit
    - Needle Cleaning Tool

- **New Faster Pour Needle**
  - Item No: 801060
  - 15.5 gauge
  - Teflon® coated stainless steel
  - Faster pour
  - Pour speed = 19 – 25 sec.

- **New Standard Needle**
  - Item No: 801059
  - 16.5 gauge
  - Teflon® coated stainless steel
  - Ideal for most bottles
  - Pour speed = 25 – 29 sec.

- **Three Needle Kit**
  - Item No: 801056
  - Kit includes:
    - 1 Faster Pour Needle
    - 1 Standard Replacement Needle
    - 1 Vintage Cork Needle

- **Argon Gas Capsule**
  - Item No: 410028
  - Individual Capsule

**Coravin™ Model One Wine System**

- Item No: 100015
- Pack includes:
  - Model 1 System
  - 2 Argon Capsules
  - Standard Needle
  - Needle Cleaning Tool
For a long time, MICHIGAN was known for its sweet wines, most of which came from North American grape varieties. However, that changed in 1969 with the planting of grapes from Europe. Because of its cool climate, it was discovered that pinot gris, riesling and gewürztraminer grow well here. Most of the state’s wineries are located near Lake Michigan. However, considering the lake is slightly smaller than West Virginia, visiting them all will take some time.
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Addition Volumes for Trials Using a 5% Solution

<table>
<thead>
<tr>
<th>DOSAGE</th>
<th>SAMPLE VOLUME, mL</th>
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</thead>
<tbody>
<tr>
<td>ppm</td>
<td>250</td>
</tr>
<tr>
<td>10</td>
<td>0.05</td>
</tr>
<tr>
<td>20</td>
<td>0.10</td>
</tr>
<tr>
<td>30</td>
<td>0.25</td>
</tr>
<tr>
<td>40</td>
<td>0.50</td>
</tr>
<tr>
<td>50</td>
<td>0.42</td>
</tr>
<tr>
<td>60</td>
<td>0.50</td>
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<tr>
<td>70</td>
<td>0.58</td>
</tr>
<tr>
<td>80</td>
<td>0.67</td>
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<tr>
<td>100</td>
<td>0.83</td>
</tr>
<tr>
<td>125</td>
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<td>150</td>
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<td>175</td>
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<tr>
<td>200</td>
<td>1.67</td>
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<tr>
<td>300</td>
<td>2.50</td>
</tr>
<tr>
<td>400</td>
<td>3.34</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. (100ppm = 0.100g/L = 0.834 lbs/1,000 gals.) Other dosage rates can be calculated using this formula:

\[
\text{Volume of solution in mL} = \frac{(\text{Desired dosage in ppm}) \times (\text{Volume of wine sample in mL})}{(\text{Concentration of solution in ppm})}
\]