



# Aromatic Whites

Aromatic whites such as Sauvignon Blanc, Riesling, Gewürztraminer, Muscat, Viognier and Pinot Gris are usually tank fermented and produced under reductive conditions with emphasis on aromatics. The following recommendations are designed to get the most from the aromatic expression of the grapes and produce high quality wines.

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage	
PRESS	SO <sub>2</sub>	Efferbarrique/Effergran/ Potassium Metabisulfite	Antioxidant Protection: Addition of SO <sub>2</sub> .		
	SO <sub>2</sub> , Ascorbic Acid, Tannin	Colortan	Antioxidant Protection: Contains potassium metabisulfite, ascorbic acid, and hydrolysable tannin which maximizes antioxidant and antimicrobial action. Can also be added at reception.	150-200 g/ton in grapes  15-20 g/hL in juice	
	Tannin	Tanenol Blanc	Antioxidant Protection: Acts as an antioxidant when added to the press.	3-10 g/hL	
	Enzyme <i>select one for use at this stage</i>	Enartis Zym Arom MP <i>(name changed from Uvazyme Arom MP)</i>		Aromatic Potential Extraction: Used for production of intense primary aromas. Also reduces amount of bentonite needed for protein stabilization.	20-30 g/ton
		Enartis Zym Caractère <i>(name changed from Progress Caractère)</i>		Aromatic Potential Extraction: Used for maximizing juice yield and aroma expression. β-glycosidase activity yields good extraction of aroma precursors. Particularly effective with grapes having significant terpene content.	10-30 g/ton
		Enartis Zym Target <i>(name changed from Progress Target)</i>		Aromatic Potential Extraction: Enartis Zym Target favors rapid cell breakdown which gives high juice yields and the extraction of aroma and flavor compounds. Can be used as both a macerating and settling enzyme.	5-40 mL for maceration  0.4-4mL/hL for juice clarification
		Enartis Zym Extra <i>(name changed from Progress Extra)</i>		Aromatic Potential Extraction: Enartis Zym Extra brings a rapid reduction in the viscosity of juice releasing aroma and flavor precursors. Wines are more complex and balanced. Can be used as both a macerating and settling enzyme.	20-50 mL/ton
SETTLING	Enzyme <i>not necessary if using Enartis Zym Target, Enartis Zym Extra, or Enartis Zym Caractère</i>	Enartis Zym 1000 S or Enartis Zym 1000 SL <i>(name changed from Uvazyme 1000 S &amp; Uvazyme 1000 SL)</i>	Rapid clarification of juice added after pressing.	1000 S: 1-2 g/hL 1000 SL: 2-3 mL/hL	
INOCULATION	Complex Nutrient <i>select one for use at this stage</i>	Nutriferrom Arom	Aroma Enhancement During Primary Fermentation: To be used with Enartis Ferm Aroma White or Enartis Ferm ES 181 yeast for increased aromatic intensity.	20-30 g/hL	

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
INOCULATION, CONTINUED	Complex Nutrient <i>select one for use at this stage</i>	Nutrifer Energy	Complex yeast nutrient for a successful fermentation. Respects varietal integrity.	5-15 g/hL
	Yeast <i>select one for use at this stage</i>	Enartis Ferm ES 181 <i>(name changed from Challenge ES 181)</i>	Aromatic Potential Expression: Especially recommended for Sauvignon Blanc and other aromatic varieties that would benefit from $\beta$ -lyase activity. Recommended for low temperature and reductive conditions.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Aroma White <i>(name changed from Challenge Aroma White)</i>	Secondary Aroma Creation: Large producer of fermentation aromas (tropical fruit, citrus, flowers). Best used on aromatic varieties such as Sauvignon Blanc, Gewürztraminer and Riesling.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 123 <i>(name changed from Challenge ES 123)</i>	Secondary Aroma Creation: Lends intense and fresh aromas of green apple, pear and flowers. Best used on aromatic varieties such as Sauvignon Blanc, Gewürztraminer and Riesling.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Top Floral <i>(name changed from Challenge Top Floral)</i>	Secondary Aroma Creation: Expresses floral aromas with notes of pear, peach, and apricot. Best used on varieties such as Pinot Gris and Viognier.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Top Essence <i>(name changed from Challenge Top Essence)</i>	Secondary Aroma Creation: Brings out tropical fruit, passion fruit, and grapefruit aromas. Release of mannoproteins. Best used on varieties such as Pinot Gris and Viognier.	200 g/ton or 2 lbs/1,000 gal
		VQ 10	Respects varietal character and is able to ferment under stressful conditions of low pH and temperature. Best used on aromatic varieties such as Sauvignon Blanc, Gewürztraminer and Riesling.	200 g/ton or 2 lbs/1,000 gal
	Polysaccharide <i>select one for use at this stage</i>	Prolie Arom	Varietal Aroma Protection: Gives aroma and color protection leading to more intense aromas. Best used on lighter white wines.	30-50 g/hL
		Prolie Blanco	Varietal Aroma Protection: Contributes aroma and color protection, as well as mouthfeel contribution. Best used on more structured whites.	10-30 g/hL
	12 HOURS AFTER INOCULATION	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.
1/3 SUGAR DEPLETION	Fermentation Nutrient	Nutrifer Advance	Nutrient providing nitrogen at mid-fermentation along with yeast hulls to adsorb fermentation inhibitors.	20-30 g/hL
	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
	Tannin	Tanenol Elegance	Varietal Aroma Protection: Provides varietal aroma protection and contributes to aromatic complexity and longevity.	5-15 g/hL

Consult the technical data sheets for each individual product for more information and specific usage instructions.



# Oak Aged Whites

The following recommendations are for white wines, primarily Chardonnay, which are barrel fermented or destined for oak ageing. The suggestions are designed to work with the unique wood and white wine interaction, while maintaining varietal character.

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
<b>PRESS</b>	SO <sub>2</sub> <i>if desired</i>	Efferbarrique/Effergran/ Potassium Metabisulfite	Antioxidant Protection: Addition of SO <sub>2</sub> .	
<b>SETTLING</b>	Enzyme	Enartis Zym 1000 S or Enartis Zym 1000 SL <i>(name changed from Uvazyme 1000 S &amp; Uvazyme 1000 SL)</i>	Rapid clarification of juice. Added after pressing.	1000 S: 1-2 g/hL 1000 SL: 2-3 mL/hL
<b>INOCULATION</b>	Complex Nutrient	Nutrifer Energy	Complex yeast nutrient for a successful fermentation. Respects varietal integrity.	5-15 g/hL
	Yeast <i>select one for use at this stage</i>	Enartis Ferm Vintage White <i>(name changed from Challenge Vintage White)</i>	Aromatic Potential Expression: Contributes varietal, white fruit aromas, and complexity. Also contributes large quantities of polysaccharides during the sur lie stage. Best for barrel-fermented whites. High nitrogen requirement, alcohol tolerant to 15.5%.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 181 <i>(name changed from Challenge ES 181)</i>	Aromatic Potential Expression: Respects varietal character. Recommended for non-MLF, oak-aged whites.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Aroma White <i>(name changed from Challenge Aroma White)</i>	Secondary Aroma Creation: Contributes tropical and sweet fruit aromas.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 123 <i>(name changed from Challenge ES 123)</i>	Secondary Aroma Creation: Expresses white fruit, green apple, and citrus aromas.	200 g/ton or 2 lbs/1,000 gal
		VQ 10	A clean fermenter that respects varietal character.	200 g/ton or 2 lbs/1,000 gal
Polysaccharide	Prolie Blanco	Varietal Aroma Protection: Contributes aroma and color protection, as well as mouthfeel contribution. Best used on more structured whites.	10-30 g/hL	
<b>12 HOURS AFTER INOCULATION</b>	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
	Oxygen	Oxygen	Pump over or macro-oxygenation before going into barrel.	
<b>1/3 SUGAR DEPLETION</b> <i>(barrel-fermented wines: only needed with major nutrient deficiencies)</i>	Fermentation Nutrient	Nutrifer Advance	Nutrient providing nitrogen at mid-fermentation along with yeast hulls to adsorb fermentation inhibitors.	20-30 g/hL
	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	

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# Rosé Wines

Vinquiry regards the fermentation of rosé wines as similar to tank-fermented, aromatic white wines. They are generally produced with emphasis on ester formation and other positive aromas. The following recommendations are designed to get the most from the aromatic expression of the grapes and produce high quality wines.

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
PRESS	SO <sub>2</sub>	Efferbarrique/Effergran/ Potassium Metabisulfite	Antioxidant Protection: Addition of SO <sub>2</sub> .	
	Tannin	Tanenol FP or Tanenol Rouge	Antioxidant Protection: Add at press to aid in color stabilization and protect against oxidation.	10-20 g/hL
	Enzyme <i>select one for use at this stage</i>	Enartis Zym Arom MP <i>(name changed from Uvazyme Arom MP)</i>	Works well with all yeasts recommended for rosés. Should be added into the press. Reduces the amount of bentonite needed for protein stabilization.	20-30 g/ton
		Enartis Zym Couleur <i>(name changed from Uvazyme Couleur)</i>	Aromatic Potential Extraction: When added to press, will aid in producing more intense aromas.	20-40 g/ton
SETTLING	Enzyme	Enartis Zym 1000 S <i>(name changed from Uvazyme 1000 S)</i>	Rapid clarification of juice added after pressing.	1000 S: 1-2 g/hL
INOCULATION	Complex Nutrient	Nutriform Arom	Aroma Enhancement During Primary Fermentation: To be used for increased aromatic intensity and complexity.	20-30 g/hL
		Yeast <i>select one for use at this stage</i>	Enartis Ferm Aroma White <i>(name changed from Challenge Aroma White)</i>	Secondary Aroma Creation: Large producer of fermentation aromas (tropical fruit, citrus, flowers).
	Enartis Ferm Red Fruit <i>(name changed from Challenge Red Fruit)</i>		Secondary Aroma Creation: Excellent aroma production. Best for fruit forward, early release wines.	200 g/ton or 2 lbs/1,000 gal
	Enartis Ferm ES 181 <i>(name changed from Challenge ES 181)</i>		Aromatic Potential Expression: Ferments well at low temperatures. Produces fermentation aromas which integrate well with varietal character.	200 g/ton or 2 lbs/1,000 gal
	Enartis Ferm Top Floral <i>(name changed from Challenge Top Floral)</i>		Secondary Aroma Creation: Ferments well at low temperatures. Expresses floral aromas of rose and jasmine.	200 g/ton or 2 lbs/1,000 gal
	Polysaccharide <i>select one for use at this stage</i>	Prolie Blanco	Varietal Aroma Protection: Aids in producing fresher, more intense and lasting aromas. Provides good color intensity and stability.	10-30 g/hL
		Prolie Round	Varietal Aroma Protection: Aids in producing intense, fruit forward aromas and wines that are softer and well-balanced. Prolie Round also improves the structure.	15-25 g/hL



Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
<b>12 HOURS AFTER INOCULATION</b>	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
<b>2 DAYS AFTER INOCULATION</b>	Oxygen	Oxygen	Pump over or macro-oxygenation.	
<b>1/3 SUGAR DEPLETION</b>	Fermentation Nutrient	Nutriferme Advance	Nutrient providing nitrogen at mid-fermentation along with yeast hulls to adsorb fermentation inhibitors.	20-30 g/hL
	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
	Tannin	Tanenol Fruitan	Varietal Aroma Protection: Addition of this tannin during fermentation increases body and fresh fruit character. It also helps to stabilize color.	100-200 g/ton

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# Pinot Noir

Pinot Noir is a delicate, aromatic, red noble grape. The tannin content usually averages approximately 300mg/L and is typically cold soaked. Aromatics, color, and mouthfeel are targeted as important components of Pinot Noirs. Extended oak ageing is often used.

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
RECEPTION/ CRUSHER	SO <sub>2</sub>	Efferbarrique/Effergran/ Potassium Metabisulfite	Antioxidant Protection: Addition of SO <sub>2</sub> .	
	Pre-Fermentation Tannin <i>select one for use at this stage</i>	Tanenol FP	One half added at reception for antioxidant protection. One half added at inoculation for more rapid polymeric color formation. Most effective on sound fruit.	100-400 g/ton
		Tanenol Rouge	One half added at reception for antioxidant protection. One half added at inoculation for more rapid polymeric color formation. Effective on sound fruit, highly recommended for damaged fruit.	100-400 g/ton
COLD SOAK	Macerating Enzyme <i>select one for use at this stage</i>	Enartis Zym Couleur <i>(name changed from Uvazyme Couleur)</i>	Aromatic Potential Extraction: Macerating enzyme for fast extraction of polyphenols and increased organoleptic balance.	20-40 g/ton
		Enartis Zym Balance <i>(name changed from Progress Balance)</i>	Aromatic Potential Extraction: Macerating enzyme for increased structure and polyphenolic potential.	20-40 g/ton
		Enartis Zym Arom MP <i>(name changed from Uvazyme Arom MP)</i>	Aromatic Potential Extraction: Macerating enzyme for increased fruit character and 'sweetness'. For better clarity and filterability, add 1 g/100 kg of Zym Couleur.	20-30 g/ton
INOCULATION	Complex Yeast Nutrient	Nutrifer Energy	Complex nutrient added at inoculation.	5-15 g/hL
	Yeast <i>select one for use at this stage</i>	VQ Assmanshausen	Aromatic Potential Expression: Yeast prized for aromatics and color extraction.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 454 <i>(name changed from Challenge ES 454)</i>	Aromatic Potential Expression: Yeast that enhances red fruit aromas for fruit forward and elegant wines.	200 g/ton or 2 lbs/1,000 gal
	Polysaccharide	Prolie Tinto	Varietal Aroma Protection: Mixture of cell wall polysaccharides, grape seed tannin and ellagitannins for more intense and stable color, more intense fruit aromas, and more volume in mouthfeel. Prolie Tinto can be used in conjunction with fermentation tannins.	150-400 g/ton
12 HOURS AFTER INOCULATION	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
	Oxygen	Oxygen	Pump over or macro-oxygenation.	



Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
<b>1/3 SUGAR DEPLETION</b>	Fermentation Nutrient	Nutriferme Advance	Nutrient providing nitrogen at mid-fermentation along with yeast hulls to adsorb fermentation inhibitors.	20-30 g/hL
	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
	Tannin <i>if desired or needed select one for use at this stage</i>	Tanenol Fruitan	Varietal Aroma Protection: Addition of this tannin towards the end of alcoholic fermentation allows for better retention of color and protection against oxidation.	100-200 g/ton
		Tanenol Red Fruit	Aroma Enhancement: Used in combination with Enartis Ferm ES 454, Enartis Ferm ES 488, and Enartis Ferm Red Fruit which has glycosidase activity that liberates precursors provided by tannins for increased red fruit aroma and protection of primary aromas. Best if half added at inoculation and half at 1/3 sugar depletion.	90-270 g/ton

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# Fruit Forward Reds

Fruit forward reds such as Syrah and Zinfandel, are usually made in a style which are aged less and consumed earlier, although Syrah can improve with age. The average tannin content for Syrah is approximately 485 mg/L and approximately 685 mg/L for Zinfandel. The tannin content range can possibly be as wide as 100 mg/L to more than 1000 mg/L for either varietal. Petite Sirah, also normally made in a fruit forward style, is known to have high tannin content.

Tannin content, a shorter ageing time and fruit forward style are all considered in the suggestions below.

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
RECEPTION/ CRUSHER	SO <sub>2</sub>	Efferbarrique/Effergran/ Potassium Metabisulfite	Antioxidant Protection: Addition of SO <sub>2</sub> .	
	Pre-Fermentation Tannin <i>select one for use at this stage</i>	Tanenol FP	One half added at reception for antioxidant protection. One half added at inoculation for more rapid polymeric color formation. Most effective on sound fruit.	100-400 g/ton
		Tanenol Rouge	One half added at reception for antioxidant protection. One half added at inoculation for more rapid polymeric color formation. Effective on sound fruit, highly recommended for damaged fruit.	100-400 g/ton
COLD SOAK	Macerating Enzyme <i>select one for use at this stage</i>	Enartis Zym Couleur <i>(name changed from Uvazyme Couleur)</i>	Aromatic Potential Extraction: Macerating enzyme for fast extraction of polyphenols and increased organoleptic balance.	20-40 g/ton
		Enartis Zym Arom MP <i>(name changed from Uvazyme Arom MP)</i>	Aromatic Potential Extraction: Macerating enzyme for increased fruit character and 'sweetness'. Use with Enartis Ferm Red Fruit or Enartis Ferm Top 20 yeasts. For better clarity and filterability, add 1 g/100 kg of Enartis Zym Couleur.	20-40 g/ton
INOCULATION	Complex Yeast Nutrient	Nutrifer Energy	Complex nutrient added at inoculation.	5-15 g/hL
		Nutrifer Arom	Complex nutrient added at inoculation for use with Enartis Ferm Red Fruit, Enartis Ferm Top 20 and Enartis Ferm ES 488 yeasts.	20-30 g/hL
	Yeast <i>select one for use at this stage</i>	VQ Assmanshausen	Aromatic Potential Expression: Popular for Zinfandel because of the long lag phase, good color contribution and aromatics.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 488 <i>(name changed from Challenge ES 488)</i>	Aromatic Potential Expression: Gives big structure and an open nose for New World style wines. Best with Syrah, Petite Sirah and Zinfandel.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Vintage Red <i>(name changed from Challenge Vintage Red)</i>	Aromatic Potential Expression: The initial closed aromas open with ageing, also producing soft tannins with under-ripe grapes. Large glycerol and mannoprotein production. Used in Old World style wines.	200 g/ton or 2 lbs/1,000 gal

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
<b>INOCULATION, CONTINUED</b>	Yeast <i>select one for use at this stage</i>	Enartis Ferm Red Fruit <i>(name changed from Challenge Red Fruit)</i>	Secondary Aroma Creation: Best for fruit forward, early release wines such as Zinfandel or Grenache.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 454 <i>(name changed from Challenge ES 454)</i>	Aromatic Potential Expression: Contributes red fruit aromas and produces fruit forward and elegant wines. Best for Syrah, Zinfandel and Petite Sirah.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Top 20 <i>(name changed from Challenge Top 20)</i>	Aromatic Potential Expression: Enhances fruit character and is also able to remove approximately 25% of malic acid. Enhances fresh cherry and strawberry aromas.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm EZ Ferm <i>(name changed from Challenge EZ Ferm)</i>	For musts with high potential alcohol.	200 g/ton or 2 lbs/1,000 gal
	Polysaccharide	Prolie Tinto	Varietal Aroma Protection: Primarily for use with Syrah. Mixture of cell wall polysaccharides, grape seed tannin and ellagitannins for more intense and stable color, more intense fruit aromas, and more mouthfeel volume. Prolie Tinto can be used in conjunction with fermentation tannins.	150-400 g/ton
<b>12 HOURS AFTER INOCULATION</b>	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
<b>2 DAYS AFTER INOCULATION</b>	Oxygen	Oxygen	Pump over or macro-oxygenation.	
<b>1/3 SUGAR DEPLETION</b>	Fermentation Nutrient	Nutriform Advance	Nutrient providing nitrogen at mid-fermentation along with yeast hulls to adsorb fermentation inhibitors.	20-30 g/hL
	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
	Tannin <i>select one for use at this stage</i>	Tanenol Fruitan	Varietal Aroma Protection: Addition of this tannin towards the end of alcoholic fermentation allows for better retention of color and protection against oxidation.	100-200 g/ton
		Tanenol Red Fruit	Aroma Enhancement: Used in combination with Enartis Ferm ES 454, Enartis Ferm ES 488, and Enartis Ferm Red Fruit which have glycosidase activity that liberates precursors provided by tannins for increased red fruit aroma and protection of primary aromas. Best if half added at inoculation and half at 1/3 sugar depletion.	90-270 g/ton

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# Bordeaux Varietals

Cabernet Sauvignon and Merlot are grand noble red grapes prized for complexity and longevity. Tannin average for Cabernet is approximately 725 mg/L, less for Merlot, although both can achieve tannin levels well over 1,000 mg/L. Other Bordeaux varietals include Petite Verdot, Cabernet Franc, Malbec and Carignane, and are frequently used for blending, but can be made as individual varietals as well. Tempranillo, the noble grape of Spain, would also be included

with this style. The following recommendations highlight the desire for extended oak ageing with these varieties as well as for reducing the possibility of green notes (pyrazines) if fruit is not mature.

Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
RECEPTION/ CRUSHER	SO <sub>2</sub>	Efferbarrique/Effergran/ Potassium Metabisulfite	Antioxidant Protection: Addition of SO <sub>2</sub> .	
	Pre-Fermentation Tannin <i>select one for use at this stage</i>	Tanenol FP	One half added at reception for antioxidant protection. One half added at inoculation for more rapid polymeric color formation. Most effective on sound fruit.	100-400 g/ton
Tanenol Rouge		One half added at reception for antioxidant protection. One half added at inoculation for more rapid polymeric color formation. Effective on sound fruit, highly recommended for damaged fruit.	100-400 g/ton	
COLD SOAK	Macerating Enzyme <i>select one for use at this stage</i>	Enartis Zym Couleur <i>(name changed from Uvazyme Couleur)</i>	Aromatic Potential Extraction: Best used for fast extraction of polyphenols and increased organoleptic balance.	20-40 g/ton
		Enartis Zym Balance <i>(name changed from Progress Balance)</i>	Aromatic Potential Extraction: Recommended for the production of big structured red wines. Increases polyphenolic potential.	20-40 g/ton
INOCULATION	Complex Yeast Nutrient	Nutriform Energy	Complex nutrient added at inoculation.	5-15 g/hL
	Yeast <i>select one for use at this stage</i>	VQ 51	Aromatic Potential Expression: Excellent all-around choice, particularly for Bordeaux varietals.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Vintage Red <i>(name changed from Challenge Vintage Red)</i>	Aromatic Potential Expression: The initial closed aromas open with ageing, also producing soft tannins with under-ripe grapes. Large glycerol and mannoprotein production. Used in Old World style wines.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 454 <i>(name changed from Challenge ES 454)</i>	Aromatic Potential Expression: Contributes red fruit aromas and produces fruit forward and elegant wines.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm ES 488 <i>(name changed from Challenge ES 488)</i>	Aromatic Potential Expression: ES 488 gives big structure, open nose, and masks green notes. Used in New World style wines.	200 g/ton or 2 lbs/1,000 gal
		Enartis Ferm Red Fruit <i>(name changed from Challenge Red Fruit)</i>	Aromatic Potential Expression: Contributes intense aromas of fruit and violets. Best used for early or moderately aged reds.	200 g/ton or 2 lbs/1,000 gal



Winemaking Stage	Enological Product	Enartis Product	Comments	Dosage
<b>INOCULATION, CONTINUED</b>	Polysaccharide	Prolie Tinto	Varietal Aroma Protection: Mixture of cell wall polysaccharides, grape seed tannin and ellagitannins for more intense and stable color, more intense fruit aromas, and more volume in mouthfeel. Prolie Tinto can be used in conjunction with fermentation tannins.	150-400 g/ton
<b>12 HOURS AFTER INOCULATION</b>	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
<b>2 DAYS AFTER INOCULATION</b>	Oxygen	Oxygen	Pump over or macro-oxygenation.	
<b>1/3 SUGAR DEPLETION</b>	Fermentation Nutrient	Nutriform Advance	Nutrient providing nitrogen at mid-fermentation along with yeast hulls to adsorb fermentation inhibitors.	20-30 g/hL
	DAP <i>if needed</i>	DAP	Diammonium phosphate for additional yeast nutrition.	
	Tannin <i>select one for use at this stage</i>	Tanenol Fruitan	Varietal Aroma Protection: Addition of this tannin towards the end of alcoholic fermentation allows for better retention of color and protection against oxidation.	100-200 g/ton
		Tanenol Red Fruit	Aroma Enhancement: Used in combination with Enartis Ferm ES 454, Enartis Ferm ES 488, and Enartis Ferm Red Fruit which have glycosidase activity that liberates precursors provided by tannins for increased red fruit aroma and protection of primary aromas. Best if half added at inoculation and half at 1/3 sugar depletion.	90-270 g/ton

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