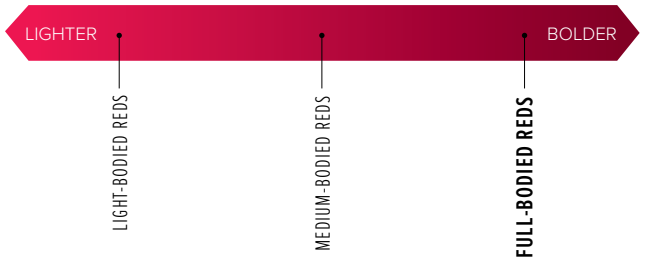
FULL-BODIED RED WINE STYLE GUIDE

This style guide is for winemakers who wish to produce a full-bodied, bold red wine destined for aging.

DEFINITION

Full-bodied red wines are generally characterized by concentrated flavor, dominant tannin and structure, and alcohol content of 14.5% or higher. They are generally made from phenolically ripe fruit with small berries.



COMMON VARIETIES

- Cabernet Sauvignon
- Syrah
- Mouvèdre
- Malbec
- Petite Sirah
- Some styles of Merlot
- Tempranillo
- Touriga Nacional
- Tannat
- Zinfandel

UNIQUE WINEMAKING CONSIDERATIONS

- **Fermenting very ripe (potentially over-ripe) grapes:**
  - **High sugar**: high sugars lead to high potential alcohols which stress yeast and can cause stuck fermentations or create "hot" wines. Yeast should always be chosen for a suitable potential alcohol tolerance.
  - **High pH**: significant acid additions may be needed. High pH also lowers the effectiveness of SO_2 and can promote the growth of spoilage organisms prior to fermentation or while cold soaking.
  - **Risk of off-odor production**: High alcohol fermentations with active spoilage organism populations can create stressful conditions for yeast and may result in the production of volatile sulfur off-odors. Therefore, no to low H_2S production strains should be considered.
- **Creating structure without over extracting**: These grapes are often full of tannin and structure-building phenolics. They should be appropriately extracted such that the wine's varietal character is not overshadowed.
- **Managing malolactic fermentation**: High alcohol wines can stress malolactic bacteria leading to stuck malolactic fermentations. Additionally, in high alcohol wines with residual sugar, after malic and citric acids have been depleted, malolactic bacteria can consume sugar and cause elevated acetic acid (VA). In high pH situations, this occurs more quickly.
- **Protecting against microbial concerns while barrel aging**: Full-bodied red wines tend toward the higher end of the wine pH scale, lowering the effectiveness of SO_2 against spoilage organisms. This is especially important as these wines are often barrel aged for long periods of time.

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WINE STYLE GUIDE FOR FULL-BODIED REDS

HOW TO USE THIS STYLE GUIDE

This guide provides process and product recommendations for the following styles of *full-bodied reds:* **varietal expression, freshness and balance, round mouthfeel, tannin forward**. It is organized by winemaking stage starting with harvest and transportation and ending with finishing. There are often several products recommended which can be used on their own, together with other products, or not at all. *For full information on each of the products, consult our website Scottlab.com.*

WINEMAKING STAGES

Click on a winemaking stage to go to its section:

— Vineyard
— Harvest & Transport
— Grape Reception And Pre-Fermentation Processes
— Alcoholic Fermentation
— Pressing and Racking
— Malolactic Fermentation
— Post-Fermentation Microbial Stabilization
— Finishing

Winemaking Stage	Suggested Action and Reasoning	Wine Styles			
		Varietal Expression	Freshness and Balance	Round Mouthfeel with Good Fruit Expression	Tannin Forward
Vineyard	Use **LALVIGNE MATURE**™ LALVIGNE MATURE is a vineyard foliar spray that enhances phenolic maturity, increases skin thickness and evens grape ripening.	LALVIGNE MATURE is sprayed once at 5-50% veraison (5% is ideal) and again 7-14 days later (10-12 is ideal). Dosage is 0.405 kg/acre (0.9 lb/acre) per treatment.			
Harvest & Transport	**Pick cold** to maintain integrity of the grapes. **Sort in the vineyard** to remove compromised clusters. Add **SO_2** or **GAIA**™ the **non-*Saccharomyces*** yeast to help inhibit the growth of VA-causing native microflora.	Recommended products added directly to picking bins: • **Sulfur Dioxide (SO_2)** • For warm fruit, low **SO_2** winemaking, high pH musts, or grapes that must be transported a considerable distance before processing: consider an addition of Non-*Saccharomyces* yeast GAIA™ (7-25g/hL) directly to grapes.			

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Winemaking Stage	Suggested Action and Reasoning	Wine Styles			
		Varietal Expression	**Freshness and Balance**	**Round Mouthfeel with Good Fruit Expression**	**Tannin Forward**
Grape Reception And Pre-Fermentation Processes	Add gentle macerating **ENZYME*** Grape skins must be ruptured to aid in release of color and aroma compounds.	Recommended **ENZYMES** for all styles: • LALLZYME EX-V™ at 10-20 g/ton • SCOTTZYME ® COLOR PRO at 10-20 g/ton			
	Add **FERMENTATION TANNINS** or **OAK CHIPS*** Tannins and oak chips can be added directly to grapes or into the fermentor to allow for earlier integration, and to address vegetal flavors if present, allowing revelation of fruit aromas. (For more help, see Scott Labs Oak and Tannin Choosing Guide).	Recommended **FERMENTATION TANNIN** or **OAK CHIPS** (choose one tannin and one oak product): • SCOTT'TAN™ FT ROUGE SOFT at 20-60 g/hL	• FEELWOOD! SWEET & FRESH at 100-300 g/hL • **THE OAK LAB™ THERMIC PROFILE 1-3,** FAN PACK at 540-1440 g/hL • **THE OAK LAB™ THERMIC PROFILE 1 - 3,** OAK CUBE at 480-1920 g/hL	• FEELWOOD! SWEET & FRESH at 100-300 g/hL • **THE OAK LAB™ THERMIC PROFILE 3-4,** FAN PACK at 540-1440 g/hL • **THE OAK LAB™ THERMIC PROFILE 3-4,** OAK CUBE at 480-1920 g/hL	• SCOTT'TAN™ FT ROUGE at 20-60 g/hL • SCOTT'TAN™ UVA'TAN at 5-40 g/hL • FEELWOOD! BALANCE & STRUCTURE at 100-300 g/hL
	Add **NON-*SACCHAROMYCES*** yeast Non-*Saccharomyces* yeast can act as a bioprotectant or to enhance aromas and mouthfeel (see Harnessing the Unique Powers of Non-Saccharomyces Yeasts).	Recommended **NON-*SACCHAROMYCES*** yeast at 7-25 g/hL (choose one): • LEVEL2 BIODIVA™ for fruit forward and round wines due to ester and arabinol (polyol) production • LEVEL2 FLAVIA™ for fruit forward and spicy wines due to the release of bound varietal aromas • GAIA™ acts as a bioprotectant inhibiting VA producing native yeast and bacteria during cold-soak • LEVEL2 LAKTIA™ for enhanced wine freshness due to lactic acid production			
Alcoholic Fermentation	Add **REHYDRATION NUTRIENT** Rehydration nutrients supply essential vitamins and minerals, help secure fermentation, and minimize the risk of stuck fermentations and off-aromas.	Recommended **REHYDRATION NUTRIENT** GO-FERM STEROL FLASH™ or GO-FERM PROTECT EVOLUTION™ at 30 g/hL when using standard yeast dose of 25 g/hL			

There's more **Alcoholic Fermentation Info** on the next page.

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Winemaking Stage	Suggested Action and Reasoning		Wine Styles: Varietal Expression	Wine Styles: Freshness and Balance	Wine Styles: Round Mouthfeel with Good Fruit Expression	Wine Styles: Tannin Forward
Alcoholic Fermentation	Add fermentation **YEAST** Selecting and acclimating a known active dried wine yeast will allow you to manage your fermentation and drive wine style. (For more help see **Scott Labs Yeast Choosing Guide**).		Recommended **YEAST** at 25 g/hL (choose one): • **BDX™** • **CLOS™** • **MT™** • **NT202** • **RHÔNE 2226™** • **SYRAH™** • **RUBY™**	• **ICV D21™** • **IONYSWF ™** • **RP15™** • **RUBY™**	• **BM 4X4™** • **CVRP™** • **ICV D254™** • **PERSY™** • **T73™** • **VRB™**	• **A33** • **ALCHEMY III** • **ICV D80™** • **NT116**
	Manage **FERMENTATION TEMPERATURE** Temperature is a driver of fermentation rate and yeast secondary (aroma) metabolism. *The higher the alcohol, the lower the peak temperature should be.*		59-90°F	61-86°F	57-90°F	59-90°F
			Ensure fermentation temperature is within recommendations for the selected yeast strain.			
	Add **YEAST DERIVATIVE NUTRIENTS*** Helps to stabilize color, aromas. Impacts balance and complexity.		Recommended **YEAST DERIVATIVE** (choose one): • **NOBLESSE™** at 30 g/hL	• **OPTI-RED™** at 30 g/hL	• **OPTIMUM RED™** at 20-40 g/hL	
	Add **FERMENTATION NUTRIENTS**** A complete nutrition strategy should be adapted based on yeast strain, sugar level and starting YAN.		Recommended **FERMENTATION NUTRIENT** (use all applicable recommendations): **FERMAID O™** at 0-40 g/hL (at 2-3 °Brix drop) + **STIMULA CABERNET™** at 40 g/hL (at 1/3 °Brix drop) or **STIMULA SYRAH™** at 40 g/hL (at 2-3 °Brix drop) + **FERMAID O™** at 10-40 g/hL (at 1/3 °Brix drop)	**FERMAID O™** at 0-40 g/hL (at 2-3 °Brix drop) + **FERMAID O™** at 10-40 g/hL (at 1/3 °Brix drop)	**FERMAID O™** at 0-40 g/hL (at 2-3 °Brix drop) + **STIMULA CABERNET™** at 40 g/hL (at 1/3 °Brix drop) or + **STIMULA SYRAH™** at 40 g/hL (at 2-3 °Brix drop) **FERMAID O™** at 10-40 g/hL (at 1/3 °Brix drop)	**FERMAID O™** at 0-40 g/hL (at 2-3 °Brix drop) + **FERMAID K™** at 10-50 g/hL (at 1/3 °Brix drop)

*For maximum color stabilization enzymes, tannins and inactivated yeast derivatives should be used. **Additional nutrition may be needed depending on the starting sugar, original YAN and yeast needs.

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Winemaking Stage	Suggested Action and Reasoning	Wine Styles			
		Varietal Expression	Freshness and Balance	Round Mouthfeel with Good Fruit Expression	Tannin Forward
Pressing and Racking	Once alcoholic fermentation is complete let gross lees settle for 24-48 hours then rack. This removes protein, pectin, tartrates, dead and vegetative cells that may negatively impact aromas and mouthfeel				
Malolactic Fermentation	Add **MALOLACTIC BACTERIA** Choose a strain that is complimentary to the wine chemistry and that will promote your desired wine style. (For more help, see **Scott Labs Malolactic Bacteria Choosing Guide**).	Recommended **MALOLACTIC BACTERIA** at 1g/hL (choose one):			
		• **BETA™**	• **O-MEGA™**	• **ALPHA™** • **SILKA™** • **VP41™** • **MALOTABS™**	• **SOLO SELECT** • **PN4™** • **ELIOS 1™**
	Add **MALOLACTIC NUTRIENT** Malolactic fermentation nutrients help the bacteria consume malic acid in a timely manner.	Recommended **MALOLACTIC NUTRIENT** • **ML RED BOOST™** at 20 g/hL			

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Winemaking Stage	Suggested Action and Reasoning	Wine Styles			
		Varietal Expression	Freshness and Balance	Round Mouthfeel with Good Fruit Expression	Tannin Forward
Post Fermentation Management	Add **MICROBIAL CONTROL AGENTS** Microbial contamination can negatively impact mouthfeel, aromas and flavors. It is imperative to protect from spoilage.	Recommended **MICROBIAL CONTROL** agents (can choose multiple agents if necessary): • NO BRETT INSIDE™ at 4-8 g/hL to control Brettanomyces populations • BACTILESS™ at 20-50 g/hL to control spoilage bacteria populations • Lysozyme at 25-50 g/hL to control lactic acid bacteria spoilage (including unwanted malolactic fermentation) • **Sulfur dioxide** depending on pH to control yeast and bacteria populations and protect against oxidation			
	Add **TANNINS** and **OAK PRODUCTS** Tannins and oak products can add oak character, improve structure, fill in mid-palate, and positively impact aromas. (For more help, see Scott Labs Oak and Tannin Choosing Guide).	Recommended **TANNINS** and **OAK** (**bench trials should be conducted to determine dose**): • SCOTT'TAN™ FT ROUGE BERRY at 5-20 g/hL • SCOTT'TAN™ ESTATE at 5-30 g/hL • **THE OAK LAB™ THERMIC PROFILE 2 - 4,** FAN PACK at 540-1440 g/hL • **THE OAK LAB™ THERMIC PROFILE 2 - 4,** OAK CUBE at 480-1920 g/hL • **THE OAK LAB™ THERMIC PROFILE 2 - 4,** BARREL INSERT 1 insert per barrel			
	Add **ENZYMES** Concentrated pectinase enzymes, or pectinase enzymes with β-glycosidase or β-glucanase side activities can enhance clarity, filterability and release bound aromatic compounds. (For more help, see Scott Labs Enzyme Choosing Guide).	Recommended **ENZYMES** (**bench trials should be conducted to determine dose**): • LALLZYME MMX™ at 1-3 g/hL to induce yeast autolysis and release of mannoproteins for rounder, smoother wines with improved filterability • RAPIDASE® REVELATION AROMA at 1-2 g/ hL to release bound aroma compounds increasing aroma and flavors			
	Add **FINING AIDS** Fining aids help clarify wine and improve filterability. They can also improve wine aroma, flavor, and mouthfeel by removing astringent and bitter characters and revealing muted aromas. (For more help, see *Scott Labs* Fining & Stability Choosing Guide).	Recommended **FINING AIDS** (**bench trials should be conducted to determine dose**): • COLLE PERLE at 80-150 mL/hL to remove astringent tannins • CRISTALLINE PLUS at 1.5-3 g/hL to clarify, add a brilliance to wines and improve filterability • INOCOLLE at 50-100 g/hL to help with clarification and reveal muted aromas • POLYCEL at 15-50 g/hL to reduce bitterness			

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Winemaking Stage	Suggested Action and Reasoning	Wine Styles			
		Varietal Expression	Freshness and Balance	Round Mouthfeel with Good Fruit Expression	Tannin Forward
Finishing	Add **FINISHING TANNINS** and **FINISHING AGENTS** Tannins and finishing products can be added from 3 weeks to 48 hours before bottling to positively impact aromas and flavors, stabilize colloids, enhance structure, add volume and mid-palate weight. (For more help, see Scott Labs Oak and Tannin Choosing Guide and Scott Labs Fining & Stability Choosing Guide)	Recommended **FINISHING TANNINS** and **FINISHING AGENTS** (bench trials should be conducted to determine dose): Consider using Scott Labs' Finishing Kit for bench trials. • FLASHGUM R LIQUIDE at 40-120 mL/hL • FINAL TOUCH GUSTO® at 20-40 mL/hL • SCOTT'TAN™ ONYX at 1-10 g/hL • SCOTT'TAN™ ROYAL at 1-10 g/hL • SCOTT'TAN™ RADIANCE 1-10 g/hL • SCOTT'TAN™ RICHE at 3-10 g/hL • SCOTT'TAN™ RICHE EXTRA at 3-10 g/hL • ULTIMA SOFT at 15-30 mL/hL			

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