

## **RED WINE TRADITIONAL VINIFICATION** LOW SO<sub>2</sub> ORGANIC



				and microbiological control
STEP	PRODUCT	DOSE	Composition	Properties
Harvest Hygiene Harvest Maturity Transport		T°C <18° C pH <3.5		Prerequisite: must be perfect from the harvesting equipment to the winery.  Very good state of health is imperative.  Harvesting at night or in the early morning.  Avoid advanced maturity (µbio risk), low pH necessary.
Bioprotection (Add yeast bin or reception dock)	SELECTYS® LA MARQUISE	0.5 g/hl	Saccharomyces galactose - (ex-bayanus)	Medium occupied by the yeast used in AF producing very little $SO_2$ .
or Biocontrol	OENOVEGAN® MICRO	3-10 g/hl	Chitosan	Curb the growth of spoilage microorganisms such as <i>Brettanomyces</i> (option).
Reception Acidification (optional)	Tartaric Acid	pH # 3.5		
<b>Vat filling</b> Vat inerting	CO <sub>2</sub> / Argon	Gas mat 40 cm	CO <sub>2</sub> / Ar (g)	
Homogenization	Pump-over	1 Vat volume		Homogenization.
Tannin treatment	OENOTANNIN MIXTE MG	20-40 g/hl	Chestnut tannins	Powerful antioxidant. Reaction with dissolved ${\rm O}_2$ and polyphenol oxidases.
AF				
Yeasting (J)	SELECTYS® LA MARQUISE	20 g/hl	ADY	Secure fermentation. Low SO <sub>2</sub> production in the absence of stress. Critical homogenization pump-over (µbio).
Nutrition	VIVACTIV® PREMIER	20 g/hl	Yeast derivatives, AA, survival factors	T° AF = 24-25°C then <25°C when d< 1020 Yeast acclimation, AF control and VA production. To be added in the leaven rehydration water.  If bioprotection: adjust the assimilable N <sub>2</sub> consumed by non Sacchs
Mid-AF (option)	VIVACTIV® CONTROLE	20 g/hl	Autolysates and yeast hulls	Difficult AF: detoxifies the medium, prevents AF from stopping <b>and</b> reactivates AF.
Extraction (d>1000)	d>1040 pump-over d<1040 pump-over Or punching down before mid-AF	1 vol/d in 2X + $O_2$ 0.5 vol /d in 2X ( $\Theta_2$ 1 to 2		Limit extraction to maintain freshness, fruitiness and colour. Limit vatting (enzyme treatment possible to reduce duration). Option: Oxygenation by clicker: 3 mg/l / 5-6 days + closed circuit pump-over.
Vatting period	CO <sub>2</sub>	1 X / day 1 to 2 weeks	CO <sub>2</sub> (g)	Prevents acetic sting. Other option: filling the tank.  Duration to be limited according to: product target / tasting / risks.
Devatting	Controlled ventilation flows	110 2 110010		Separation of lees, flows, presses. Possible additional racking (+48h). Pressing in clean presses to avoid herbaceous flavours.
MLF inoculation - Co-inoculation (AF D+1 or 2) if possible - or end of AF (If KTS AF)	BACTELIA® CRESCENDO	Kit dose / X hl	Oenococcus oeni	Choice of inoculation type to be pondered.  Operates in difficult conditions (high alcoholic strength). Optimum T° = 18°C.  Co-inoc: better control of Brett populations and acetaldehyde level.  MtF: Possible sulfiting (low \$O <sub>2</sub> ) at the end of MLF + 7 days.
Ageing		[O <sub>2</sub> ]<0.4 mg/L		Controls dissolved $O_2$ : $CO_2$ inerting + $N_2$ injection during transfers.
Tannin treatment	OENOTANNIN VELVET	10 g/hl	Seed tannin	Use oenological products without $SO_2 =>$ powders. Structures and protect the wine (dissolved $O_2$ ).
dissolved CO <sub>2</sub>	CO <sub>2</sub>	800 - 1000 mg/l	CO <sub>2</sub>	Protection. Maintain [CO <sub>2</sub> ] > 800 mg/l and adjust (600 mg/l) before
Stabilization	MFT			use. µbio stabilization.
If μbio problem	OENOVEGAN® MICRO	3-10 g/hl	Chitosan	Brettanomyces population control (option).
Bottling				Sulfiting (low SO <sub>2</sub> ). Early bottling during winter.

