



## SPARKLING WINE PROTOCOL

### Primary Fermentation Processing Stages

Harvest and Transportation	The grapes should be harvested at low sugar (aim for 18-19 Brix). Grapes should be hand-picked and sorted to eliminate any compromised fruit. Try to minimize the skin contact and berry breakage.
Pressing	Press immediately using low pressure. It is recommended to discard the first 13 gallons from the first ton of grapes. From 1 ton of grapes you can expect to yield approximately 125 gallons. This is dependant upon varietal, fruit, and winemaking conditions.
SO <sub>2</sub> Management	Additions are based on the grape chemistry and grape health. You should add the SO <sub>2</sub> to the pressed juice (never to the grapes or in the press).
Settling	Use pectic enzymes (Scottzyme Pec5L) at ~1.0mL/hL to assist with settling. Rack cleanly to fermentation tank with approximately 1.5% solids.
Primary Fermentation	<p>For a neutral base wine use DV-10. For fruity base wine, choose QA23 or VIN 13. It is highly recommended to use a rehydration nutrient (Go-Ferm Protect) to assist the yeast with the harsh conditions of the base wine. For a full rehydration protocol, see website <a href="http://www.scottlab.com">www.scottlab.com</a>.</p> <p>Keep the fermentation temperature in the range of 54-70°F and add appropriate yeast nutrients and oxygen at 2-3 brix drop and ½ sugar depletion.</p>
Racking	Rack 48 hours post fermentation.
Fining, Stabilization & Filtration	Fine with Cristalline Plus (1-2 g/hL) and rack once settling is complete. This should take approx. three weeks. It is important to ensure that the base wine is stable in regards to proteins and tartrates. Proceed with heat and cold stability treatments. This is very important - if there are any particles left in the wine then you can have bottles that gush excessively upon opening. The wine should be sterile filtered before proceeding to the secondary fermentation.
Prise de Mousse	Prise de Mousse is the step in the process where additional sugar is added and converted to CO <sub>2</sub> . This can be achieved either by building up a yeast culture or by using encapsulated yeast. For details on applicable use and wine parameters, please see full protocol.

Riddling	Traditional riddling is not required when using the encapsulated yeast. Just invert bottles and the beads will drop into the neck of the bottle within 12 seconds.
Disgorging	<p>The bottles need to rest for at least 8 days prior to disgorging (removal of yeast). They should be well-chilled to minimize loss of pressure and wine. The necks of the bottles are submerged into a freezing solution which will freeze the yeast into a solid mass. Rinse bottle and hold the bottle so that the air bubble is behind the frozen mass (~45° angle). Using great care, pry the cap of the bottle and the resultant pressure will blow the mass out of the bottle. If freezing is not possible, then pry the cap off the bottle while the bottle is in the upside down position but starting to invert. As soon as the mass is disgorged, cover the opening of the bottle with the thumb to prevent wine loss. <b>You should wear eye and hand protection when disgorging and always aim away from yourself and others.</b></p>
Dosage	<p>This sugar solution mixed with SO<sub>2</sub> is added to balance the acidity of the sparkling wine and define the style.</p> <p>Brut Natural does not have any sugar added  Brut contains 0-15g/L sugar  Extra Dry contains 12-20g/L sugar  Dry contains 17-35 g/L sugar  Demi-Sec contains 33-50 g/L sugar  Doux contains &gt;50g/L sugar</p> <p>To make the dosage, dissolve 650-750g/L sugar in hot water. Once it has cooled, slowly add the desired amount of SO<sub>2</sub>.</p> <p><b>For sugar additions use the following formula:</b></p> <p><u>Desired sugar (g/L) x 750 mL</u> = mL of sugar solution (dosage) per bottle  Sugar solution (dosage prepared) (g/L)</p> <p><b>For SO<sub>2</sub> additions use the following formula:</b></p> <p><u>Desired SO<sub>2</sub> addition (mg/L) x 750 mL</u> = SO<sub>2</sub> concentration of liqueur  Dosage addition</p> <p>Example: If a finished sugar level of 10 g/L (1%) is your goal and the dosage solution you prepared is 700 g/L (70% solution), a 10g/L sugar addition would be equal to 10.7mL per bottle. And in this bottle you want to have a 20ppm (mg/L) addition of SO<sub>2</sub>, then this would be 15mL per 750mL bottle. This must be incorporated into the dosage solution slowly.</p>
Topping	Following dosage, the bottles need to be topped to minimize headspace. This is done with the wine that was disgorged.
Corking & Aging	<p>Champagne corks are specialized, as is the equipment used for insertion. These should be secured with a wirehood. Alternatively, crown caps or plastic stoppers can be used.</p> <p>The bottles should be allowed to age for at least three weeks prior to consuming. This allows for the dosage to be integrated. Protect from heat and light to avoid detrimental effect on the aromatic profile of the wine. Enjoy!</p>