Grape analysis in winemaking
- Why is effective grape sampling and analysis important?
- How can I sample grapes?
- How should I store, transport and process grape samples?
- How do I measure grape berry ripeness and what equipment is needed for analysis?
- How do I undertake sensory ripeness assessment of grape berries?

Juice and must preparation in winemaking
- What size wine press should I buy?
- How do I manage unwanted botrytis or rot in harvested grapes?
- When should pH adjustments be made to the must rather than to the fermented wine?
- How do I adjust a juice with high pH and high titratable acidity before fermentation?
- I sometimes see the sugar content of grape juice and must reported as °Brix, sometimes just as Brix. What is the correct nomenclature and why does it matter?
- How should I calculate and make additions of grape concentrate to juice, musts and wines?
- How does skin contact affect a white wine style?
- What are the pros and cons of using pectinase when preparing a white must?
- Is must clarification necessary?
- What is the best way to cold settle my white juices?
- How should I treat a must from white grapes containing laccase?
- How can I avoid oxygen exposure with a white must?
- How should I calculate and make water additions to facilitate the fermentation of red musts?
- What is Saignée and how will it affect my red wine?
- What is thermovinification and why should I use this technique?
- Should I add enological tannin prior to the fermentation of a red must to affect its color?
- How can I estimate when to fortify a fermenting juice to achieve desired sugar and alcohol concentrations?
- What is the ideal temperature to press ice wine ("frozen") grapes?

Yeast fermentation in wine
- What different types of fermentor are there and which should I use for red and white wines?
- What materials are used in constructing fermentors and how does this affect fermentation and storage of wine?
- What is a yeast “strain”?
- Does the yeast strain have an influence on the fermentation kinetics and on the wine aromas and flavours?
- What is a native flora fermentation?
- What factors are important in deciding to use a yeast inoculum versus allowing the native flora to conduct the fermentation?
- What is yeast assimilable nitrogen (YAN) and how much is needed?
- How do I measure YAN?
- How do I interpret YAN data?
- When and how do I adjust YAN?
- Is it important to rehydrate active dry yeast with a precise procedure?
- Is the yeast population homogenous throughout the tank during fermentation?
- What is the influence on the yeast of oxygen addition during alcoholic fermentation?
- Is it important to inoculate the grape with yeast before a cold soak with Pinot Noir?
- What is the difference between “carbonic maceration” and “whole berry fermentation”?

Malolactic fermentation (MLF) in wine
- How many different types of malolactic starter culture (ML starter culture) preparations are in use today?
- What are the ideal conditions for storage and rehydration of ML starter cultures?
- When should I inoculate for MLF?
- What are the advantages and the risks of inoculating with ML starter cultures at the beginning of alcoholic fermentation?
- What is the impact of temperature on MLF?
- Is it possible to manage the diacetyl levels in a wine?
- Are there other factors beside SO2, pH, alcohol content and temperature that can have an impact on malolactic bacteria (MLB) vitality and activity?
- Do I have to add nutrients to my MLF?
- Does the yeast used for alcohol fermentation have an impact on malolactic MLF?
- How can I monitor MLF?
- How much residual malic acid will cause visible MLB growth/carbonation in the bottle?

**Wine clarification, stabilisation and preservation**

- What role does vineyard nitrogen management play in juice processing and wine instabilities?
- How do additions of potassium sorbate, potassium metabisulfite or potassium bicarbonate impact the cold stability of my wine?
- Why do I have to heat-stabilize my white wines with bentonite?
- What should I use: sodium or calcium bentonite?
- I was told to treat my wine with casein. What is the best procedure?
- What is sorbate?
- How much sorbate should I use in wine?
- I mixed up potassium sorbate and citric acid together to make a sorbate addition and an acid adjustment prior to bottling. An amorphous white precipitate has formed and is floating on top of the mixture. What is it and what should I do about it?
- What does “contains sulfites” mean versus “no added sulfites”?
- What is molecular sulphur dioxide (SO2) and how does it relate to free and total SO2?
- How can I protect my grapes and juice from spoilage during transport to the winery?
- The wine’s pH is 3.95. How much free SO2 do I need to prevent malolactic bacteria (MLB) or Brett growth?
- What is lysozyme and why is it used in winemaking?

**Wine filtration**

- How should I interpret references to 'size' in the context of filtration?
- What are my options in terms of filtration?
- What is osmotic distillation?
- What are typical types of filters?
- How do I decide what membrane pore size to use?
- Do sterile filter pads really exist?
- How can I minimize filtration?
- My wines are difficult to filter: where can I look to solve this issue?
- Can the physical nature of wine particulates effect filtration rate and volume?
- Does filtration affect wine quality?
- I’ve heard that filtration strips my wine. Is it really necessary?
- What operational parameters should I monitor during filtration?
- What is integrity testing and when should it be performed?
- After sterile filtering wine, what membrane flushing schemes are recommended?
- When can I bottle a wine without filtering it?

**Wine packaging and storage**

- What is the best sterilization option for the bottling line?
- How long do I need to disinfect my bottling line if my hot water is less than 82°C (180°F)?
- How do I steam the bottling line?
- What does sterile bottling involve?
- What chemical additives can I utilize as an additional source of security in helping prevent the threat of re-fermentation or microbiological instability in the bottle?
- How significant is oxygen pick up during bottling?
- How can I control oxygen uptake at bottling?
- How much oxygen can I have in my bottles at filling?
- How many corks out of a 5,000-cork bale would I need to sample to assure a taint rate of less than one bottle out of five cases?
- Will screw caps make my wine better?
- Can synthetic closures take the place of corks?
- What precautions do I need to take when using 'bag in box' packaging?
- What's the best way to store a wine bottle: sideways, upside down or closure up?
- What effects do post-bottling storage have on package performance?
- What are the optimum environmental parameters for bottle storage and what effect do these parameters have on wine quality?
- What temperatures can my wine be exposed to during national and global shipments and storage once it leaves the sheltered winery?

**Winemaking equipment maintenance and troubleshooting**
- What are common problems in the stemming-crushing operation and how can these be remedied?
- Why won't my electric motor start?
- What other problems might I encounter with my electric motor?
- What different types of pumps are there for wine and/or must transfer?
- What are the strengths and weaknesses of different types of pump?
- Why isn't my pump priming and why isn't it pumping fast enough?
- How do I care for the winery pump?
- What is bubble point membrane filter integrity testing?
- How do I perform a bubble point membrane filter integrity test?
- What's the best way to store a wine bottle: sideways, upside down or closure up?
- Why are my bottles underfilled?
- What should I consider for winery preventative maintenance?
- What is corrosion?
- What is stainless steel?
- What is corrosion in passivated materials?
- How do I clean and protect stainless steel?
- How often do I need to lubricate my destemmer, press, corker jaws etc?

**Winery microbiology and sanitation**
- What are the essential elements for an operational sanitation program?
- What are biofilms and are they important in winery sanitation?
- What is cross-contamination?
- What are viable but non-culturable organisms and should I be concerned with them during winemaking?
- I am buying a microscope for the winery. What features should I look for and how can I utilize it best in the winery?
- Should I use or continue to use bleach or chlorinated cleaners in my sanitation program?
- We use chlorine bleach to clean the floors and walls of the crush area and cellar once a season, and rinse well afterwards. Is this advisable?
- What should be used instead of chlorine bleach to clean and sanitize the winery?
- What is environmental TCA?
- What is ozone and how is it used in the winery?
- How do I clean my wine tanks?
- How do I clean my winery transfer hoses?
- How can I determine if my sanitation program is successful?
- What are the safety issues associated with sanitation operations?
Brettanomyces infection in wine
- What is "Brett"?
- What are the different strains of Brettanomyces and where does ‘Brett’ come from?
- How does Brettanomyces grow?
- What does Brettanomyces do to wines?
- How do I sample for Brettanomyces testing?
- What methods do I have available to detect a Brettanomyces infection?
- How can I culture the Brettanomyces strain in my wine?
- How can I manage Brett in the cellar?
- Can I bottle my wine unfiltered if it is infected with Brett?
- How should I prepare my wine for bottling if it has ‘Brett’?

Particular wine quality issues
- How do I know my samples are representative?
- How do I use factors of ten to make blend trials in the lab easier?
- Why did both my wine’s pH and titratable acidity drop significantly after fermentation?
- How do I improve my wine color?
- What is wine oxidation and how can I limit it during wine transfer?
- What is the difference between oxidative and non-oxidative browning?
- How do I identify and treat sulfur off-odors?
- A sulfides analysis run by our wine lab shows the presence of disulfides in my wine. Should I treat it with ascorbic acid, sulfur dioxide (SO2) and copper?
- Can I use silver (alloys) instead of copper to bind reduced sulfur compounds such as hydrogen sulphide (H2S) and mercaptans?
- My wine smells like old fish what should I do?
- My wine is too astringent what do I do?
- I have a lactic acid bacteria problem in my winery. How do I control it to avoid high volatile acidity?
- What are the types of hazes that can form in a wine?
- How much residual sugar will cause visible yeast growth and/or carbonation in the bottle?
- What causes films to form on the surface of a wine?
- A thin, dry, white, filamentous film has formed on the surface of my wine. What is it and how do I get rid of it?
- I have whitish film yeast growing on top of my wine in the tank (or barrel) that is resistant to sulfur dioxide (SO2). What should I do?
- I am a great fan of Burgundian bâtonnage. How often should I stir my lees to release the most mannoproteins?