

Second Annual
INNOVATION+QUALITY Awards

Barrel Stave Selection by Phenolic Chemistry

We chose Barrel Stave Selection by Phenolic Chemistry as a category of innovation because it represents a fundamental shift in how coopers make barrels. The emphasis has moved from the oak's origin to its compositional chemistry. The ability to measure the phenolic composition of each individual stave on the production line and use this data to raise barrels where all the staves have a known composition allows the cooper to exercise much more control over the processes. We may never reach a consensus as to which phenolic values make the ideal barrel for any given wine, but without measurement and experimentation we can't even begin to try to figure that out.

TANNIN SELECTION BARRELS

Vicard Generation 7



Jean-Charles Vicard created **VICARD Generation 7** on the premise that controlling for the high degree of variability in barrels is achievable through the combination of precise tannin level management and state-of-the-art, computerized toasting. With independent, scientific confirmation of the impact of tannin selection and computerized toasting, Jean-Charles Vicard turned his attention to shape and form and has created a unique barrel based on The Golden Ratio: Phi, 1.618. This specialized barrel, made entirely by hand and requiring specialized skills to achieve the golden ratio, is available in all three tannin levels but extremely limited in production. Le Nombre d'or represents the perfect union of science, technology, design and artisan achievement.

ESSENCIA

Demptos Napa Cooperage

The **Demptos** Essencia oak barrel is made exclusively from wood selected for its naturally high level of norisoprenoids. It has a resolutely modern design and harmoniously imparts a rich and complex flavor to wine.

ICÔNE CONCEPT

Seguin Moreau Napa Cooperage

Seguin Moreau's ICÔNE concept is a method of chemical analysis of wood's extractable substances to identify oenological potential. The end product is a barrel precisely targeted to particular types of barrel aging to achieve specific and reproducibly elegant results. Seguin Moreau's research and development manager **Andrei Prida** and his team have taken the study of oak wood's grain composition and its interaction with wine further, towards the molecular level of oak barrels and the chemical



reactions that determine a wine's aroma and flavor quality. To determine the role of oak-derived flavor compounds, Prida studied the correlation between the flavor impact that chemical compounds, such as tannins and phenolics, impart and the actual flavor attributes winemakers seek for their wines. As a result, the cooperage now tests rough oak staves and segments those with specific makeup of the compounds that will benefit full-bodied red wines, lending finesse and predictability. The staves are re-tested throughout the aging cycle to ensure their suitability for the ICÔNE program.

OAKSCAN

Tonnellerie Radoux

Tannins have a crucial impact on the organoleptic properties of the wines or spirits they enrich. Until now, a time-consuming laboratory analysis was required to measure ellagitannins in wood. **Tonnellerie Radoux**, along with researchers at INRA and CEMAGREF, have developed a unique

