

Cross Calibration of Panelists across International Locations

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Introduction

Calibrating panelists at international locations can be challenging. As a matter of fact, cultural, as well as panel leader differences contribute to panel variability at different locations, even when a standardized language is used. This testing will demonstrate how cross calibration of panel leaders with panels at multiple locations can enhance panel performance.

Objective

- To determine and to quantify the differences between a panel in North Carolina (LLC) and Belgium (SPRL) trained to identify off flavors in wines.
- To utilize acceptable and unacceptable corcs to demonstrate when a corc should fail wine sensory testing.

Sample Preparation

Wine Soak- 48 hour Aroma & Flavor ambient method

- Five corcs of each variable are placed in 500ml amber glass jars in duplicate.
- Jars were filled to cover with Livingston Cellar Chablis Blanc & Domaine Vinsmoselle, Luxembourg, Rivaner wine from a 3 liter ROTE capped glass bottle and 3 liter BIB (bag in box) wine.
- Each sample set included one bottle that did not include any corcs to be used as a reference.
- Bottles were allowed to sit for 48 hours at ambient temperatures before evaluation.
- Thirty ml of each sample was decanted into wine glasses and covered with a watch glass.
- All samples were coded with randomly generated three digit numbers written on the base of the wine glass with a marker.
- Samples were allowed to sit for a minimum of 30 minutes to allow headspace to develop in the glass.



Figure 1. Wine Soak



Figure 2. Sensory Evaluation of wine soaked in contact with corcs — Flavor Evaluation

Descriptive Analysis Panel

- Panelists were instructed to compare the aroma first and then the flavor of each sample to a labeled reference of wine that has been handled the same as all other samples except without contact with corcs. Each panelist evaluated the samples in duplicate in different sessions.
- Panelists use the following scale:

Legend
1 = Acceptable
2 = Marginally Acceptable
3 = Marginally Unacceptable
4 = Unacceptable

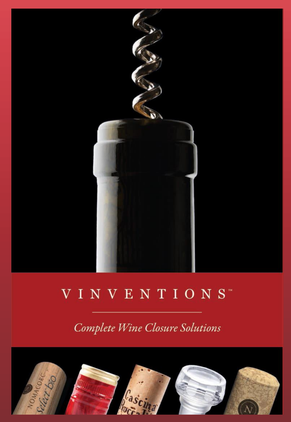
- At least one embedded no-soak control is included in each sample set.
- Data sets of any panelist rejecting the control are excluded.

	Characteristics
SPRL Wine	alcohol – fruity – apple – mineral – fresh – acid
SPRL Wine + Acceptable Corcs	play-doh old play-doh – play-doh (but very strong odor) – chemical – plastic – dust – rubber
LLC Wine	fruity – apple – blackcurrant – sugar
LLC Wine + Unacceptable Corcs	play-doh – sugar rubber – petroleum – play-doh (but very strong odor)

Table 1: Wine Descriptors generated by Belgian Sensory panel on US base wine and Belgian base wine

Statistical Analysis

- XLSTAT Pro (Add-in software, New York, NY) was used to analyze data.
- Anyone not correctly identifying the control was excluded from the statistical analysis.



Results

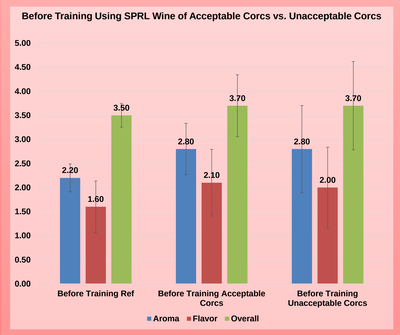


Figure 3. Mean Acceptance Scores and Standard Errors Before Training

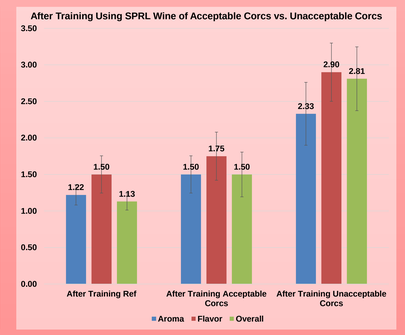


Figure 4. Mean Acceptance Scores and Standard Errors After Training

Conclusions

- Panelists were able to detect off notes more consistently after multiple training sessions.
- Panelists were able to differentiate between acceptable and unacceptable corcs in base wines from each location.
- Focused training on specific off-notes across locations increased the performance of the panel at both international locations.

Future Work

- Differences between locations remain so future calibration and training will continue.
- Quarterly round robin samples will be sent to each location to maintain calibration.
- Focus on acceptable and unacceptable samples in wine.

