



Sensory Evaluation of Wine – Descriptive Analysis

Descriptive Analysis is a reliable method used to characterise the sensory profile of wine. A panel of trained and experienced wine judges evaluates a flight of wines blind for aroma/flavour, taste and mouth feel descriptors. The intensity of each perceived descriptor or “attribute” is then scored and the sensory information is statistically evaluated, mapped and interpreted by a trained professional.

Procedure:

The expert sensory panel will assess 4 to 6 wines blind (flight type may be red, white or rosé) for a number of pre-selected attributes using intensity scales. Judges will also be required to perform a ranking assessment of all wines where they will score the wines and provide comments on each sample. The wines will not be assessed for typicality but will be rated for flaws, taints as well as overall balance. Clients may decide to include in the tasting one or more wine references that represent a particular price point or quality standard. To ensure panel performance and validity of the results, wines will be tasted in replicates and the sensory data analysed using statistical software. Tasting location and set-up will conform to best industry practices.

List of descriptors:

Red/rosé wine (15 attributes):

Aroma attributes: vegetative, vegetal/herbaceous, berry, cassis, green bell pepper, spicy, oak/woody,

Flavour, taste and texture attributes: berry, oak/woody, astringency, bitterness, acidity, mouth feel, length of finish, balance.

White wine (15 attributes):

Aroma attributes: vegetative/herbaceous aroma, floral aroma, citrus fruit aroma, tropical fruit aroma, stone fruit aroma, spicy aroma, oak/woody aroma

Flavour, taste and texture attributes: mineral, oak/woody flavour, vanilla/butterscotch flavour, bitterness, acidity, mouth feel, length of finish, balance.

Sensory Profiling and Mapping:

One of the advantages of using Descriptive Analysis is that it provides visual representations of the sensory profiles of wines. These graphical representations are called spider plots and Principal Component Analysis (PCA) plots (See Figures 1 and 2). A spider plot may be used as a sensory reference to characterise a specific wine or to describe the similarities and differences in aroma, flavour or taste of a selection of wines.

A PCA plot (See Figure 3) is a map linking sensory attributes to wine samples. The distance between samples indicates how similar or how different the wines' sensory profiles are. The PCA plot makes wine characterisation easy since wine samples are best defined by their nearby attributes.

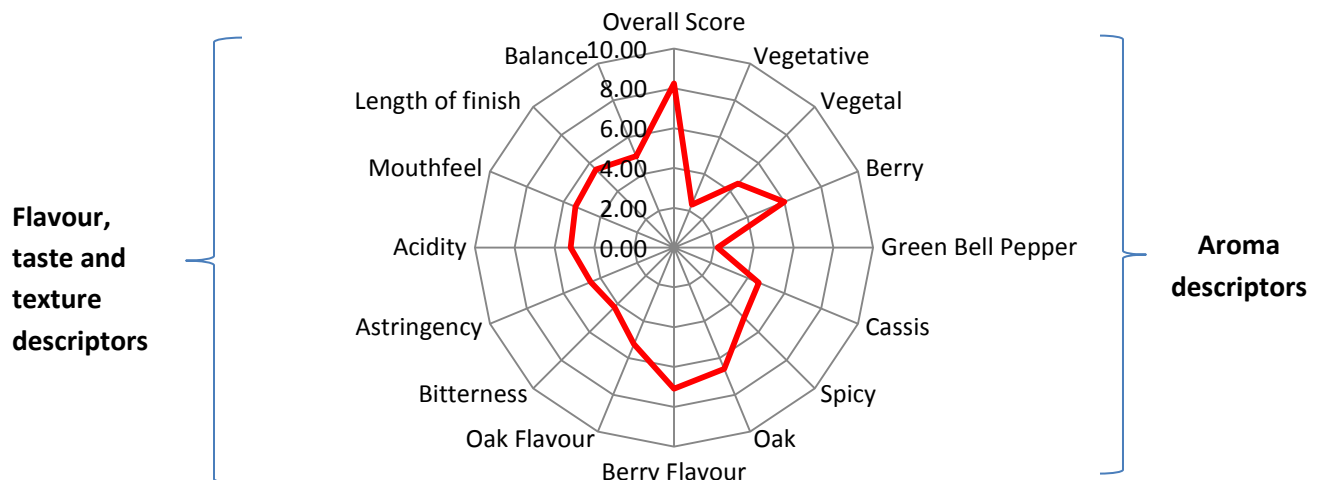


Figure 1: Spider Graph Cabernet Merlot

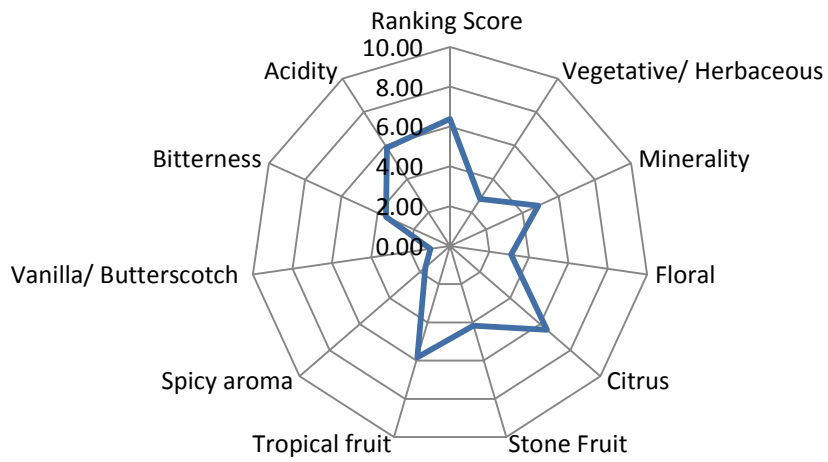


Figure 2: Spider Graph for unoaked Pinot Gris

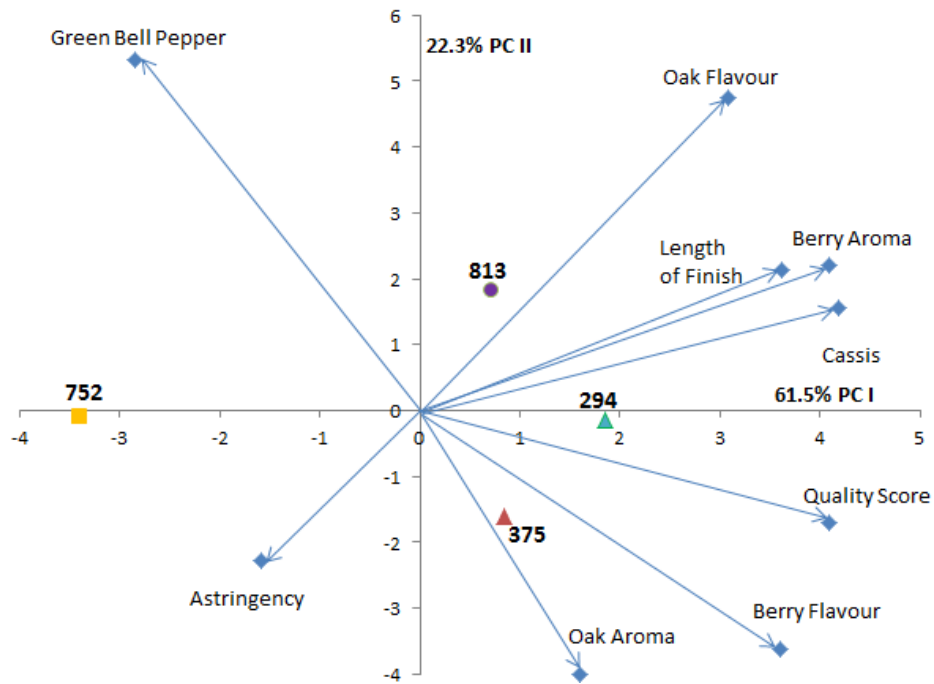


Figure 3: PCA plot for 4 Cabernet Sauvignon wines

Why use Descriptive Analysis (DA)?

Within the context of a business operation and strategy, descriptive Analysis is a sensory tool used to support and document Quality and Product Development activities. It is also used by Sales and Marketing groups to benchmark products (price point setting) and identify consumer preferences. DA methodology compliments the routine tastings performed by winemakers and winery personnel. It may be used to determine how a change in viticulture (irrigation, canopy management) or winemaking practice (barrel ageing, blending, choice of yeast, barrel toast levels or fermentation vessel) may impact the sensory profile of wine. DA can also be used as a quality control measure to identify taints and defects or to track the development of desirable aroma, flavour or texture attributes.

Wine samples are assessed by an expert panel that provides an objective and statistically valid sensory profile of each wine. Descriptive Analysis is best utilised when noticeable sensory differences exist between wine samples. Commercial or pre-bottling samples may be submitted for evaluation.

Panel performance

The validity of Descriptive Analysis (DA) is dependent on the performance of the wine panel. Panel performance (acuity, reproducibility and consistency) is monitored through training and the use of statistics. The Sirocco wine panel is composed of very experienced wine professionals who combine close to 50 years of wine tasting experience. All judges have wine education credentials (WSET advanced diploma, internal sommelier diploma, wine panel judging). They have been trained on the descriptive analysis methodology.

Conflict of interest

To avoid any conflict of interest, judges, who work or have worked in the last 3 years as winemaking consultants or salaried employees for specific wineries will not be assigned to tasting the wines submitted by their employers or former employers. In addition, panel judges will not be referred to clients to provide consulting services following the release of the tasting results.

Sirocco Food+Wine Consulting follows British Columbia's Serve it Right guidelines. Principal and panel coordinator, Karine Lawrence, is also a certified food safety

professional. Refer to www.siroccoconsulting.com for additional information regarding sensory testing and food safety services.

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