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#### **ANALYZING AND SYSTEMATIZING WINE ORGANOLEPTIC ESTIMATION METHODS**

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**Abstract:** *This article is dedicated to analyzing wine organoleptic methods. It also considers wine influence on human health depending on the wine consumption degree. The article makes the special emphasis on the role of human senses in forming the attitude to different wine varieties.*

**Key words:** *color, flavor, degustation, organoleptic estimation method, wine.*

Our topic is up-to-date because, firstly, it is closely related to many sciences. For example, wine chemistry as a science was founded by Louis Pasteur, French biologist and chemist. The problems of viticulture were actively studied by Alexander Negrul in the Soviet Union. The questions of microbiology were learnt by Nadezhda Burian.

Wine is known as the alcoholic drink obtained by either full or partial grape juice alcoholic fermentation. Secondly, it occupies its own unique place among all three types of human requirements. Wine contributes to satisfying the famous physiological needs. It means that is both a drink that is able to quench ones thirst and an excellent supplement to our meals that is capable of improving our food digestion. Then wine is able to inspire artists, writers and poets all over the world to create their masterpieces, meeting their need for inspiration. This beautiful

beverage has so many admirers across the globe that it can also satisfy one's social need [1].

Thirdly, wine hides the dangers connected with its consumption unfortunately. On the one hand, we know any wine to be rich in ethanol. Excessive ethanol consumption is likely to result in severe health problems, both physical and mental. But, on the other hand, according to many investigations, being consumed in small amounts wine is actually good for your health. It is high in tannin that can improve our cardiovascular system condition. Resveratrol is also abundant in wine. Being capable of burning stored fat, this compound is also able to prevent Alzheimer's disease.

Organoleptic estimation is evaluated as a vital food safety process in all food processing industry branches. But wine is all about flavor and aroma profile, and it determines its quality, pleasure the customer will get from the wine and, thus, its price. Thereby, degustation becomes the main oenologist's instrument in his quest to produce the best quality wine, and the sommelier's instrument in his quest to choose the right wine for his client and help him uncover its full potential [2].

Our research aim is to analyze the wine organoleptic properties as our research object and systematize it into the wine organoleptic estimation method as the subject.

Basically, wine has three types of properties defined via sensory organs: appearance, aroma and taste. Each of these properties are often related to as the wine "eye", "nose" and "mouth" respectively by professional sommeliers. In order to make reasonable conclusions about wine you have to describe all of these characteristics. Wine clarity is known to be its main trait. It is possible to describe most kinds of wine as *clear*, while wine *haziness* can indicate a production or storage failure. Color intensity is characterized as another noticeable parameter. Specifying only how much pigmentation the wine has, it does not determine the tone itself. The best way to do so is to look at the liquid rim in tilted glass. A wine can be described as *pale*, provided its rim is both broad and watery. Provided the pigment reaches almost the end of the rim, this wine can be described as *deep*.

Wine color itself is of importance. It is defined by balance of red, blue, yellow, green and brown pigments found in wine, and it should be described independently of the intensity level. The color is distributed homogeneously in the wine, so it would not change when looking through the different wine parts in the tilted glass. However, the liquid depth alteration also changes its intensity: white wines appear almost colorless at the rim, while most red wines can appear almost opaque at the core. White wine color ought to be judged by its core, while red wines color is most accurately assessed near the rim.

White wine color can usually be placed in a scale running from *lemon-green* to *brown*. The former is characterized by significant greenness and the latter has got the noticeable browning level. And most white wines are described as *lemon*. When describing the red wine color; it can be placed on the scale from *purple* to *garnet* and *tawny*. The former is described as the wine that is rich in blue, and the latter is viewed as the one combining both brown and red colors. The wines having

got no redness in blue are termed as *brown*, and the most common red wine color is certain to be *ruby*.

There are also some other ways to observe the appearance. We know bubbles to be an essential part of sparkling wines. And liquid streams that adhere to the glass side after the swirl known as either wine legs or tears can also be the weighty information source.

Aroma is also estimated as an essential wine trait. Describing it can be a challenging task, as every person's nose is unique. According to their origin, aromas are subdivided into three main parts including primary, secondary and tertiary ones. It is possible to group each of them into individual clusters, such as *citrus fruit*, *black fruit*.

Primary aromas mean the ones existing right after fermentation. Some of them are inherited straight from the grapes and others are created during the fermentation process. They usually include fruity, floral, herbaceous and pungent spice aromas. Secondary aromas are created by means of post-fermentation processes, such as malolactic fermentation, such as butter, cheese, yeast autolysis, for example, bread, pastry, yogurt, or can be extracted from oak, for instance, vanilla, smoke, chocolate. Tertiary aromas have their origin in ageing processes. Their developing process changes the Primary aromas. Becoming less fresh, they appear in either more dried or cooked character.

There is also a category of aromas related to failures. Being usually unpleasant, they are easy to feel. For example, being present in wine, Trichloroanisole gives it the damp cardboard aroma. Such wines are often referred to as *corked*.

The most complex part of the tasting is palate which the mouth is responsible for. It consists of many components. Being characterized as sugar taste that is present in wine, sweetness varies from dry to sweet. The former is characterized as the one with no detectable sugar, and the latter is evaluated as the one with sugar being dominant in the taste. Being characterized as the level of tartaric, malic and lactic acids, acidity should not be described only by the sour taste. The reason is that high sweetness tends to mask the taste of acids.

High acidity level makes your mouth produce saliva, restoring the natural acid balance, this mouth-watering effect being a reliable way to measure acidity level. Tannins are an organic compounds class that shares the ability to bind and precipitate saliva proteins, making your mouth dry up and feel rough. They are even characterized by the little bitter taste to it. Tannins are especially vital for red wines. Being varied, these wines are of different taste [3].

Alcohol greatly contributes to wine texture as well as body. Low alcohol levels can make wine a little watery, while high levels can trigger the pain receptors, giving a burning sensation. Body is defined as the overall textural mouth-feel created by the wine. High sugar, alcohol and tannin levels cause the wine to feel full-bodied, while high acidity and harsh tannins make it be lightly-bodied. Being characterized as the desirable sensation persistence after the wine had been either swallowed or spat out, is also characterized as an important quality indicator.

The particular flavors palette is usually the same as aromas detected by the nose. Therefore, flavors share the same division principle as aromas. Both earthy and

spicy flavor profiles tend to strengthen because of the mouth heat, while floral and fruity profiles will not be so bright [4].

Systematical approach to degustation is vital to make any reasonable conclusion about the wine quality, readiness for drinking and ageing potential.

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### IS VIRUS A FRIEND OR A FOE?

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***Abstract:** The article gives an overview of nature of viruses, models of virus mutation. It indicates some ways of transferring of viruses among humans and provides a brief information on adaptation of viruses for people’s needs.*

***Keywords:** virus, multiplication, genetic material, genetic shift, genetic drift.*

I would like to start the article with a question. Are viruses really harmful? Actually, most of them aren’t harmful at all and some of them are even useful for human beings because they help in the evolution of living organisms. It’s only some viruses that sometimes go out of order and cause diseases. Nowadays, we often use the word “virus”, but does anyone know how viruses that once infected only animals now threaten the lives of people?

In order to start talking about this interesting topic, first of all we should understand what a virus is. Actually, the answer is quite simple. A virus is a non-cellular form of life that can multiply inside cells. They are dangerous both for animals, plants and for people as well. I have tried to answer the question about