DESCRIPTIVE TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION TO VINIFICATION

What is enology? The book commences with a first chapter that defines the basic concepts of this science, provides a historical contextualization, and follows its evolution until the present day. As a starting point, we reveal one of our secrets: the scientists of note and people—supporters of Bullipedia—who have inspired us by their studies and scientific rigor, and who have guided us throughout this volume.

We will also become acquainted with how the different players in the field of enology conduct their activity, while calling to mind and reflecting on the words of the Bullinian sommelier David Seijas: "Sommeliers are increasingly becoming enologists and enologists are increasingly becoming sommeliers."

What winery-related factors determine that one wine differs from another? Or, more important, why are there better and worse wines? We will observe vinification and enology from a holistic perspective. As a science—with a cameo appearance from Eric Asimov included—and from different approaches: mathematical (enologists are not easily separated from their calculation notebooks); philosophical (are there such things as Platonic and Aristotelian wines); and linguistic. However, above all, there is the artistic approach: Can wine be a work of art? Is the enologist an artist with the ability to innovate? Read the chapter to find out.

CHAPTER 2

ENOLOGICAL MOVEMENTS

Movements are artistic, cultural, and ideological manifestations of a specific time that share a series of characteristics. To understand them, it is essential to take the period and context in which they arose into consideration. What we call or know as "natural wine" today is very different from what was called "natural" 100 years ago. Herein lies the greatness of the movement: It is not static, but changes, just like people's fashions, tastes, and culture.

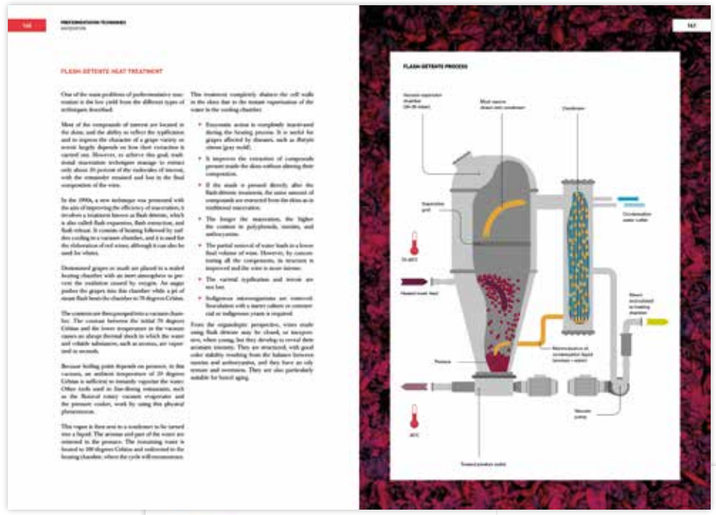
This chapter provides an overview of the different enological movements (conventional, international, parcel-based, organic, natural, minimal intervention, and biodynamic) and ends with the most modern currents being developed by the leading figures in contemporary enology, such as Jamie Goode and Sam Harrop, Master of Wine (MW).

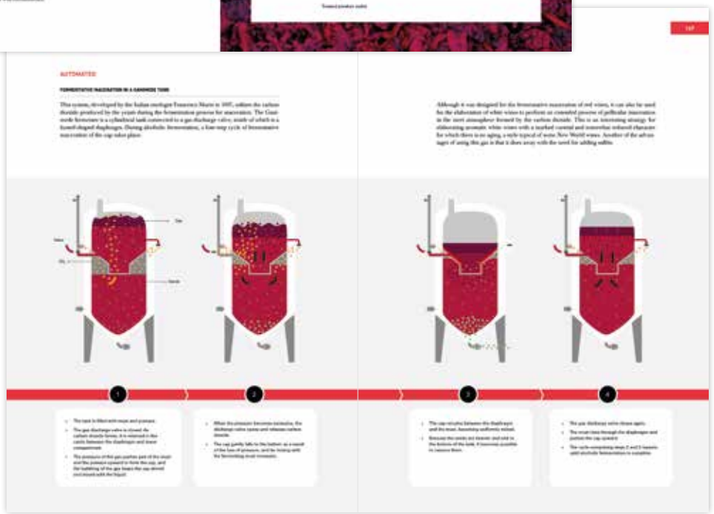
CHAPTER 3

PREFERMENTATION TECHNIQUES

An aim of elaborating wines with minimal intervention is to avoid the use of enological treatments. Although this is a goal for many winemakers, the reality of the world of wine is that most wineries employ different enological techniques, tools, and products to obtain the wine they want. You will learn about them in this chapter, along with the techniques that are used prior to fermentation: from transportation and reception to destemming, crushing, pressing, settling, and maceration (although this process can also be a part of fermentation for red wines and certain whites). All of these stages are explained in detail, with classifications and types. You will become familiar with how they are carried out, the tools that are used, and which styles of wine involve their application.

This chapter does not intend to set dogmas or offer advice on the best and worst ways to elaborate a wine; instead, it offers a broad view of all the options for preparing grape must for fermentation under the best conditions.





CHAPTER 4

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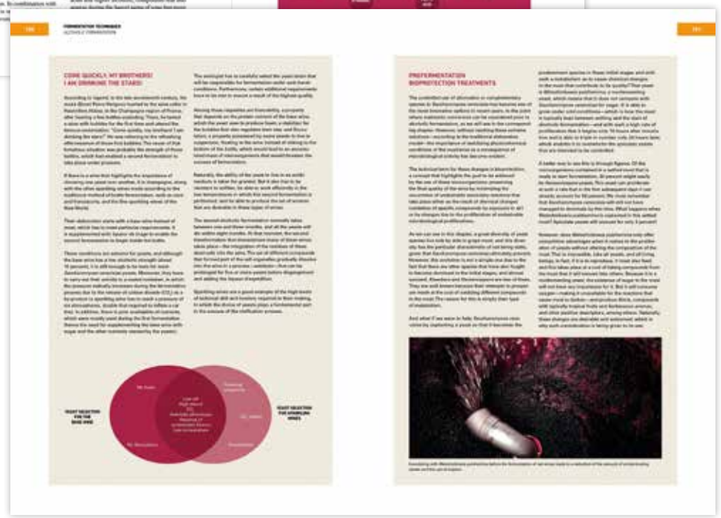
FERMENTATION TECHNIQUES

The production of wine depends on fermentation and its extraordinary complexity. For it to work, it is essential to have the assistance of tiny beings that are invisible to the naked eye: microorganisms, certain "bugs" with a goal that is the same as that of any other living thing—to live and perpetuate themselves. In this quest for subsistence, they feed and reproduce, undertaking metabolic processes throughout their lives with a result that will be the complex and flavorsome wine.

In addition to explaining the life of yeasts and bacterias, and their classifications, this chapter explores all forms of fermentation, with a special focus—due to their relevance—on alcoholic and malolactic fermentations. Enologists have many options available to them during this stage. The temperature of the must and its control, inoculation with yeasts and bacteria, or not, and process control, among others, are variables that will result in wines with different profiles.



CHAPTER 5

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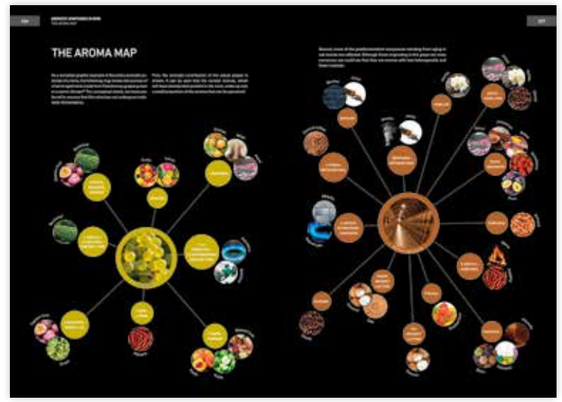
AROMATIC COMPOUNDS IN WINE

This chapter starts by refuting a predetermined idea that for years has classified aromas into primary (those originating in the fruit), secondary (those produced during vinification), and tertiary (those developed during the aging process). This differentiation does not exist, or if it does, the lines of separation are so blurred that this classification, which has been repeated ad nauseam within the world of wine, cannot be considered true. This book questions commonly held ideas and, guided by the Sapiens methodology, proposes a new classification of these compounds, veritable deceivers—in the best possible way—of our olfactory receptors.



Throughout this chapter, we will endeavor to answer a key question: How are odorant compounds formed? In addition, we will propose a new classification: varietal compounds, prefermentative compounds, and postfermentative compounds. We will also highlight human perception. Limitations in *Homo sapiens* have led our sense of smell to perceive compounds as a whole, and it is mostly unable to distinguish them individually and according to their origin. In short, this chapter will become a true, altough not the only, aromatic guide, because of the richness and complexity of the field of aromas.

CHAPTER 6

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BARREL AGING

The aging of a wine, a typical step after fermentation, is the focal point of this chapter. It is the process to which a young wine—full of energy, sometimes too much—is subjected to guide and educate it on its path to rest, complexity, and a much-coveted balance. In short, its transition to becoming an adult wine. The Spanish term for barrel aging, *crianza*, comes from the verb *criar* (to rear, instruct, and supervise), the goal of which—in the case of wine—is to modify its aroma and flavor. By smoothing and rounding, the wine is turned into something delicious. However, not all wines are aged equally or are prepared to take this leap and come out of the maturation process as a thing of beauty. This is why we will also explain what a wine should have to age correctly.

This chapter highlights the most recognizable and essential tool for aging to this day: the oak barrel. For this purpose, we will go back to the origin and deepen our knowledge on oak wood, as well as on possible alternatives.

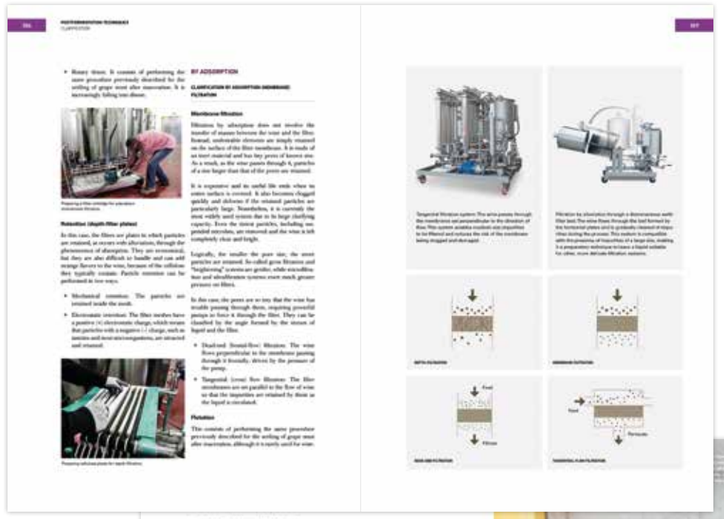
Because we are also aware of the evolution undergone by aging tools, we will explore certain techniques, such as wood chips and microoxygenation, that aim to imitate and improve on the use of barrels in terms of time and price—and which are increasingly being used in the wine industry.

CHAPTER 7

POSTFERMENTATION TECHNIQUES

This chapter covers all the processes that wine undergoes after its fermentation, from blending until immediately before bottling. Wine is an elaborated product that will be sent to market after bottling and remain there for months, even years. For this reason, most wineries make sure that their wine is as homogeneous (maintaining a particular style) and stable (not changing over time) as possible.

To achieve a desired style, enologists will use their knowledge, experience, and mental palate, all of which go into creating a blend that comes close to their ideal wine. To keep it stable, many techniques are applied in the winery. Although lacking in appeal, they are effective and enable the wine to remain technologically stable for longer. How is this achieved? By clarifying, filtering, and stabilizing the wine—in short, by applying the procedures and tools that we explain in this chapter, which will enable obtaining a clean wine that has undergone the minimum of undesirable modifications in the bottle.



CHAPTER 8

PACKAGING TECHNIQUES

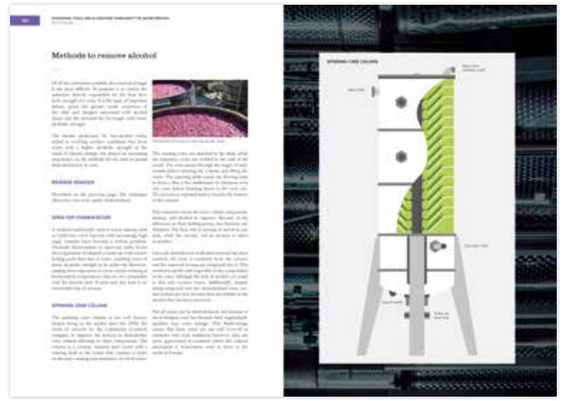
This chapter highlights the three things that allow for wine to go from the winery to the market. We will be dealing with the glass bottle and its inseparable companions. The first of these is the stopper, or cork, with real cork being one of the most valued and prestigious options. We present the many alternatives to this natural product that are now challenging its hegemony: screw caps, glass stoppers, biopolymers, etc. The second is the bottle's constant companion, the label. It gives a sense of the work carried out by the winery. Much of the winery's image depends on it, and it is one of the key parts of the winery's communication and customer relationship. We explore the legal requirements that such communications must contain to convey information to the consumer.

Speaking of bottles, we take an in-depth look at the 750 ml bottle, as well as describe the other alternatives to this vessel, depending on the time of consumption.

CHAPTER 9

TECHNIQUES, TOOLS, AND ALTERATIONS THROUGHOUT THE ENTIRE PROCESS

Although making wine may appear idyllic and idealized to us, it is actually an industrial process that has a goal of delivering as polished as possible a product to the market for all those who want to enjoy it. There are many ways of elaborating wine. While some wineries reduce their intervention to the minimum, others employ different techniques, additives, and processing aids to elaborate high quality wines. Some of these techniques are applied throughout the entire winemaking process, from start to finish: rectification (reverse osmosis, dealcoholizing, tannin addition, the use of enzymes to develop aromas), sulfite addition, and the use of inert gases. All of these are examples of techniques that enologists have mastered and constantly practice to create their ideal wine.



This chapter ends with an overview of the different vessels used in vinification and the impact each one has on the final result.

CHAPTER 10

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VINIFICATION OF SPECIAL WINES

"Special" is the somewhat appropriate term used by the Organisation of Vine and Wine (OIV) to designate all wines that are not covered by the orthodoxy of still wines: sous-voile (flor-aged) wines, fortified wines, sparkling and artificially carbonated wines, and sweet wines. This chapter explores these wines, their elaboration, styles, and flavor.

Although the OIV classification is sufficiently generic to take in practically all special elaborations, we also propose a new way of classifying this heterogeneous category to avoid the confusion often created by certain special wines. We put it to the test with such famous and fascinating wines as sherry, port, Madeira, champagne, cava, and rancio wines.

CHAPTER 11

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THE VINIFICATION SPACE

Wineries are places where vinification takes place, and, as such, they share similar spaces. They all have a grape-receiving area, a fermentation cellar, a bottling machine, and an area to store enological products. In spite of this, they can be remarkedly different in shape (some occupy truly palatial buildings, while others are architectural landmarks) and size (they can be located in a garage, industrial building, etc.). Even so, they each must have something in common in order to be called a winery—they must have the necessary tools for elaborating wine and an architectural design that allows for production to take place comfortably and that ensures the safety of their employees. This chapter also looks at such trends as sustainable architecture, which provides optimum use of the space while saving energy and reducing waste.

CHAPTER 12

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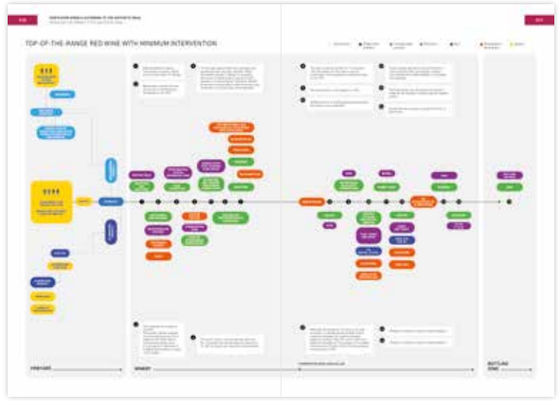
VINIFICATION MODELS ACCORDING TO THE AESTHETIC IDEAL

An enologist has the ability to imagine a wine and create it, and the fascination you feel when you discover the characteristics that make the wine you are tasting unique, these are what an enologist considers. This chapter is all about how wine is made according to an aesthetic ideal.

Without overlooking the essential role played by nature in the elaboration of wine, we describe the many decisions that go into modulating its flavor, interpreting the fruit of the earth through the enologist's eyes—and hands—to succeed in giving the wine the desired expression. In short, it is about making the wine a product of beauty and making it taste of beauty.

How is it possible to imagine a wine and then take the concept from the enologist's mental palate and turn it into the ideal result according to their exact criteria?



By applying knowledge, tasting the wine, and using the different existing vinification resources (products, tools, techniques, and enological technologies).

To explain this process, we will draw on the experience and knowledge of leading enologists, including Dominique Roujou de Boubée, Antonio Tomás Palacios, Anna Espelt and Xavier Martínez, Eduardo Ojeda, Jaume Gramona, and Anna Martí Pitart. They form an enological dream team.

CHAPTER 13

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CLASSIFICATIONS

This 130 page chapter could be a book in itself. It details the 24 categories that we consider to be the most important for understanding wine from different perspectives. These are all divided into 117 criteria that allow for wines to be ordered and classified.

Examples include the classification of wines by their country of origin, region, geographical indication, variety, average temperature, yield, maturity, flavor, and price, to name a few. Why were these categories chosen and not others? Because of their importance and, above all, their customary use in fine-dining restaurants, where they are a part of the day-to-day life of sommeliers and wine professionals.

The chapter and, by extension, the book ends with 20 leading wines that will allow us to use and verify the aforementioned classifications.