

# Dr. Klaus – Spirit - Consulting

## Or The Wonderful World of Distillation

*(what is it about?)*

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After the mastery of fire, the invention of the wheel, tools of various uses and irrigation techniques, distillation is one of the oldest procedures invented by human beings. It has undergone multiple improvements and modifications over the centuries and today it is one of the most widespread industrial techniques worldwide, mainly thanks to the refining of petroleum products.

During antiquity, its application was mainly limited to cosmetic applications. Subsequent use for medicinal purposes was recurrent until the late Middle Ages with origins in Eastern culture. It was only with the entry into the modern era, and particularly in the old European continent, that its application for obtaining spirits intended for human consumption developed. It is difficult to determine which of the different raw materials (fruits, cereals or sugary plants) used for its production was the first used.

In parallel with the industrial revolution, the methods of obtaining the different spirits have diversified considerably. New distillation techniques were introduced, and in the course of the 20th century, the art of aging in wooden barrels was gradually improved. Nowadays, the focus of the main research centers in this area is on optimizing the design of distillation equipment, the refinement and refining of distillates, as well as the diversification and selection of raw materials.

## B A practical expert for more than 30 years

*(What distinguishes me?)*

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Coming from a strong background in organic chemistry, I immersed myself in the world of Oenology at the Faculty of Oenology in Bordeaux. I specialized in wine spirits with a dissertation on the prestigious Armagnac spirits. Then I accepted the call from Portugal and dedicated my entire professional career to the elaboration of spirits used in the fortification of Port Wine.

Over almost 30 years, always loyal to the same employer, I have acquired a very deep practical experience ranging from the formulation of distillate batches, optimization of distillation modalities, refinement techniques (ion exchange resins), filtration and, "last but not least", the selection of raw

materials. A holistic and comprehensive view of the entire spirits production complex represents a very important added value and can make a difference in the growth of your company.

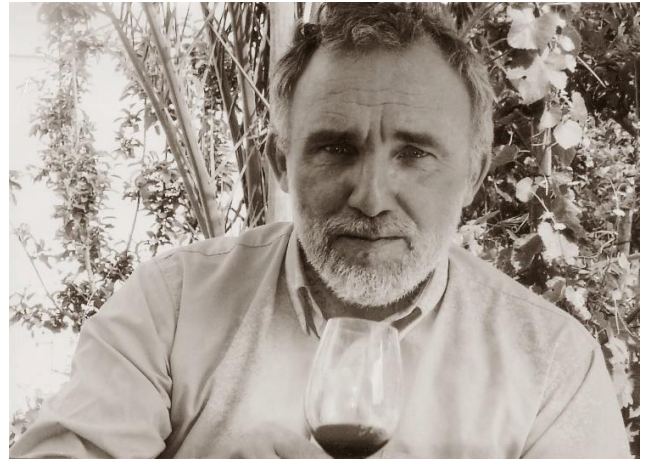
## **C I am**

*(who am I and what is my professional and academic career)*

### **Klaus Bertsch**

*Oh DR. Rear. Not.*

- German
- 69 years
- Married



### **Professional career[edit]**

- From 1992 to 2021 responsible for QA and R&D of the Zuzarte Reis Group with two production units (DVT, Lda and SLD, S.A.) in Torres Novas, Portugal and three processing units in Spain (Vinibasa, S.A. and later Viñaoliva, S.A. in Almendralejo, Province of Badajoz, Extremadura and DVT Spain in Tomelloso, Province of Ciudad Real, Castilha-la-Mancha) with a main focus on the production of wine spirits for Port Wine. Other segments of responsibility involved the fermentation of grape pomace sauces, the concentration and fermentation of red pomace washes, the extraction of calcium tartrate from wine lees, the production of grape seeds from dealcoholized grape pomace and the treatment of wastewater, as well as the integration of all procedures with a view to achieving a sustainable production mode following the concept of circular economy.

### **Education and education**

- From 1988 – 1992 PhD (Dr. rer. nat., 3rd cycle Bologna) in Oenology-Ampelography at the Institut d'Oenologie of the University of Bordeaux II, France
- From 1987 – 1988 Diplôme d'Etudes Aprofondies, DEA (2nd cycle, Bologna) in Oenology-Ampelography at the Institut d'Oenologie of the University of Bordeaux II, France
- From 1986 – 1987 Diploma in Physical-Organic Chemistry (2nd cycle, Bologna) at the University of Tübingen, Germany
- From 1978 – 1986 Chemiestudium (1st cycle, Bologna) at the University of Tübingen, Germany
- De 1974 – 1976 Fachgebundene Hochschulreife am Carl-Benz-Gymnasium, Mannheim, Alemanha
- From 1971 to 1974 Trained as a Chemical Laboratory Assistant at BASF, AG, Ludwigshafen am Rhein, Germany
- From 1966 – 1971 10th year at the Realschule Schwarzach, Germany

### **Service to the community**

- From 1976 to 1978 Civil service as an alternative to military service in the Dienst Ambulanter Service of the Socialamt Ludwigshafen am Rhein, Germany, in home support for the elderly and people with physical disabilities

### **Language faculties**

- German; mother tongue
- English; fluent (C1 in comprehension/speaking/writing)
- French; fluent (C1 in comprehension/speaking/writing)
- Portuguese; fluent (C1 in comprehension/speaking/writing)
- Spanish; regular (B2 in oral comprehension/expression and B1 in writing)

## **D My consulting proposal**

*(what do I propose?)*

## **1. Raw Material Selection**

A fundamental step in obtaining any quality product, with my long professional experience I can give valuable tips in this very important aspect.

## **2. Process Monitoring**

Well-defined process monitoring modalities leave nothing to chance, reduce downtimes and ensure the continuity of fluid production and the maintenance of a high level of product quality.

## **3. Adaptation of Distillation Systems**

Also an important aspect: each raw material has its specific characteristics and knowledge of the most suitable distillation system for each case can make a big difference.

## **4. Special Applications of Ion Exchange Resins**

In certain situations, the application of ion exchange resins can be a determining factor in solving delicate problems. Especially in the field of contaminants from various fields (heavy metals, physiologically active agents, etc.) this tool can be a valuable aid.

## **5. Filtration**

The visual aspect also plays a role: a crystalline distillate without defects in clarity and color purity makes the product attractive and attractive, contributing to its successful marketing.

## **6. Sensory Evaluation**

Like any food product, the sensory quality of wine spirits is of fundamental importance. The definition of sensory characteristics and the control and verification of their compliance with the required customer profile play a central role in the manufacture of spirits.

## **and Contact**

*(how can you contact me?)*

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Alternatively, you can use this

Contact form: