100% Oenologique

SEGUIN MOREAU

QTT

QTT

AFTER THREE DECADES OF RESEARCH FEATURED IN RENOWNED SCIENTIFIC JOURNALS, SEGUIN MOREAU HAS ADVANCED KNOWLEDGE OF MATURATION IN BARRELS AND IS CONTINUING TO GAIN AN EVEN MORE PRECISE VIEW OF HOW OAK CONTRIBUTES TO THE PRODUCTION PROCESS FOR THE MOST PRESTIGIOUS WINES. CONTINUING THIS WORK IN PARTNERSHIP WITH THE ISVV (INSTITUTE OF VINE AND WINE SCIENCES), WE ARE NOW ABLE TO ANALYZE WOOD IN GREATER DETAIL AND OFFER NEW MATURATION SOLUTIONS.

THE **QTT** BARREL IS ABLE TO ENHANCE THE STRUCTURE OF WINES WHILE PRESERVING THEIR EXPRESSION OF FRUIT AND THEIR VINEYARD IDENTITY.

BEHIND THE SCENES OF OUR RESEARCH ACTIVITIES

For many years, the increased sweetness, richness and volume gained from maturation in oak barrels was observed but not scientifically understood.

It was not until 2007 that a team of researchers from SEGUIN MOREAU's long-time partner the ISVV, headed by Prof Denis Dubourdieu and Dr Axel Marchal, decided to begin working on the subject.

Two hypotheses where put forward: Either the additional sweetness was entirely the result of previously identified 'sweet/soft' aromas from the wood or toast level, or it was due to unknown odorless molecules characterized by a sweet flavor.
The latter working hypothesis was adopted.

NEW MOLECULES DISCOVERED

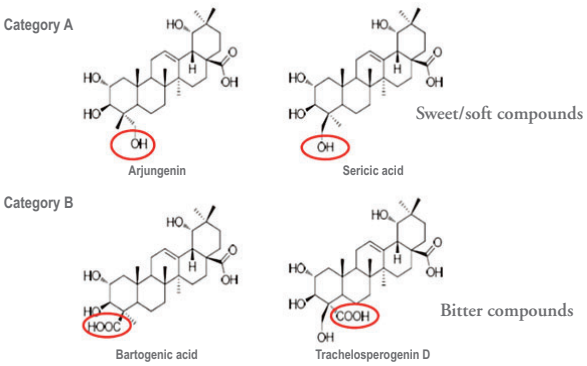
After three years of detailed research, including developing innovative, in-depth analysis methods, the researchers had identified the sweet elements present in French oak. Their analyses revealed a new family of molecules called triterpenosides, hitherto unknown compounds offering significant sweetening properties.

The chemical nature and plant of origin of these molecules gave rise to the scientific name 'quercotriterpenosides', or QTTs.

Over the next three years, the team continued to dig deeper into their field of research and also identified other molecules (from the Glu-AB family) that were structurally similar to QTTs but characterized by bitterness.

These two joint discoveries (QTT, categories A and B) have shed scientific light on a balance of flavors, a compromise between the presence of these two classes of sweet and bitter molecules.

Two classes of wood triterpenes analysed using liquid chromatography paired with mass spectrometry (LCMS) / 2014 patent



Glu-Ab = glycosylated derivative of bartogenic acid

A RARE PRODUCT SUBJECT TO ALLOCATIONS:

> This barrel – the result of an extensive R&D program and holding an Institute of Vine and Wine Sciences (ISVV) and SEGUIN MOREAU patent – is made from the molecules of the same name, which are not commonly found in nature, and is therefore only **available on allocation**.

A PATENTED METHOD APPLIED TO THE BODY AND HEADS

> A careful selection applied to 100% of the **QTT** barrel, ensuring uniformity and traceability.

Wood type:

French oak

Models available:

. Bordeaux Export, 27mm
. Bourgogne Export, 27mm
. Bordeaux Château Ferré, 21mm
. Bordeaux Château Tradition, 21mm

Single toast:

. Medium Open (MO),
to allow the specific qualities of QTTs to be expressed to the fullest

A PATENT IS BORN IN 2014...

Working alongside the known compounds in barrels (volatile or non-volatile compounds, tannins etc.), these QTTs – which are naturally present in oak – have proven valuable for the barrel maturation process. But how do we identify them and optimize their impact on wine being aged in barrels?
For five years, the expert teams at ISVV and SEGUIN MOREAU studied, analysed and ran tests to optimize QTTs' effect on wine and determine with certainty whether they were present in oak destined for barrel production.
This valuable, long-term collaboration enabled the teams to develop a unique method that could determine QTT concentration in wood precisely, a method that was jointly patented by the two institutions from 2014 onwards.

... AND A UNIQUE BARREL IN 2020!

For the next four years, various maturation tests, analyses and comparative studies were undertaken as proof of concept, all adhering strictly to the cooperage's specifications for the development of new products.

The first rough QTT staves arrived at the Merpins site – the historic heart of SEGUIN MOREAU cooperage – in 2017.

So, in 2020, after more than eleven years of research and development and a period of onsite maturation, the first **QTT** barrel was born.

WOOD ANALYSIS IN DETAIL: SCIENCE AND ADVANCED TECHNOLOGY ENHANCING YOUR WOOD

A sample is taken from every piece of timber used in each of our stave mills, and the sample is analyzed by the ISVV. QTTs are then measured using *high performance liquid chromatography (HPLC)* paired with '*Fourier transform mass spectrometry' (FTMS)'* – both high-precision technologies.

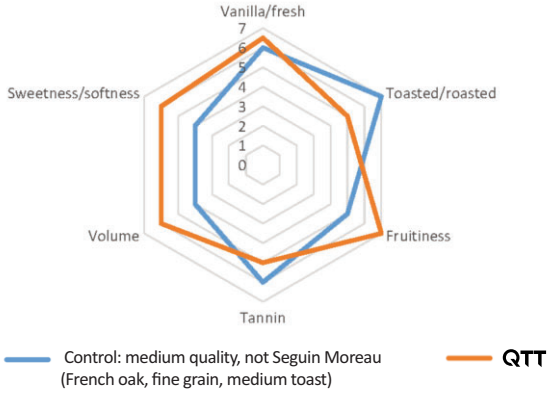
WHAT IS THE ORGANOLEPTIC EFFECT ON MY WINE?

- Barrels are indisputable indicators of flavor. By adding sweetness or flavor to the mid-palate, they keep a wine lingering and help to carefully preserve the particular features of grape varieties and terroirs.

- A barrel offers fullness and softness without overburdening or distorting, and makes a perfect container for very expressive wines, particularly fresh and well-structured fine reds.

- A barrel is also a response to the genetic variability of wood, and offers a better way to control the impact that oak has on a wine's sensory qualities.

SENSORY EFFECT ON A CABERNET SAUVIGNON & MERLOT WINE
(12 months of aging)



QUALITY AND SAFETY

All of our barrels are subject to strict manufacturing conditions designed to ensure food security and meet current regulatory requirements.

Quality and food compatibility certificates are available upon request: info@seguinmoreau.com

CONTACT

Our sales team is happy to help you with your choice and provide the benefit of their experience.

To take advantage of their personalized advice, please email: info@seguinmoreau.com

FAQ:

QTT:
WHAT PATENTS AND PROTECTIONS ARE THERE?

SEGUIN MOREAU holds an operating license from the University of Bordeaux. The patent is held jointly by Seguin Moreau and the University of Bordeaux, and covers the commercialization of QTT analysis technology.

WOOD AND MATURATION:

1. The wood used for the body has undergone this QTT analysis. What about the heads ?
The heads are also made from QTT timber. The body and heads come from the same oak.

2. Is the maturation process in QTT wood longer than in the Standard or Icône ranges?
No, we recommend the same length of maturation.

3. Are the tests performed in line with our normal Icône process, or are they different?
The wood sampling process is the same as for Icône (timber in rough staves), but the chemical analysis is different: it focuses on QTT compounds, and the analysis is performed at the University of Bordeaux laboratory (ISVV).

TESTING:

1. Were comparative tests compared against standard barrels or the Icône range?
All tests were compared against the standard range. The **QTT** barrel sample proved softer and higher in quality every time.

2. Why do œnologists see such a difference between this new QTT barrel and a market-standard barrel?
The sweetness from the **QTT** barrel comes through in the mid-palate. Sweetness in the attack is sometimes associated with the influence of olfactory perception, and is therefore very short-lived. In the mid-palate, however, it is higher quality and lingers. This explains the key difference between samples tasted from this new barrel and those from standard offerings found on the market.

TOAST:

1. Why a single MO toast?
The Medium Open toast has been shown to allow QTT to express itself the best. Other toast levels will therefore lessen the difference between a **QTT** barrel and a standard barrel.

2. Are the heads toasted?
No, we do not toast the heads, to allow the features of the barrel to be fully expressed.

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