



PRESS RELEASE OCTOBER 2015

## INNOVATION IN BARREL MAKING

OAKSCAN® : 7 YEARS IN OPERATION AND ALREADY 5 MILLION ANALYSES CARRIED OUT

*With the invention of the OAKSCAN® process, which helps analyze and select each barrel stave according to its potential of tannic content, Tonnellerie Radoux added a new criteria in its wood selection, complementary to that of the origin and grain. After 7 years of use and over 5 million analyses, Radoux now has at its disposal the world's widest database on the chemical composition of French oak.*

**Oakscan: a unique process for instantaneous measurement of the content of ellagitannins**

After several years of research, in 2008 Tonnellerie Radoux introduced the **first control system** which could **measure the quantity of polyphenols** present in staves used for making barrels : **OAKSCAN®**.

These polyphenols, the majority of which are made up of **ellagitannins**, have a major impact on the wines or spirits they enrich: they alter the sensory profile, the tannic structure, and the color and provide protection against oxidative breakdown.

**OAKSCAN®** is a system based on Near Infra red Spectrometry, measuring the content of polyphenols in a few seconds, directly on the solid wood.

As a consequence, the selection of wood based on chemical criteria helps determine categories with higher or lower tannin content (from the highest IP60 to the lowest IP20) and improve the homogeneity and reproducibility of the results after aging thanks to the precision thus introduced into the wine making process.



## A chemical knowledge of the wood completed by numerous tests and trial programs

At the cutting edge of research in its criteria for wood selection, and constantly seeking improvement, Tonnellerie Radoux's R&D team regularly carries out numerous tests and trial programs to demonstrate the impact the OAKSCAN® process can have on the organoleptic properties of wines.

These tests are carried out on a wide scale with the collaboration of the ISVV of Bordeaux on wines coming from the great wine producing regions worldwide.

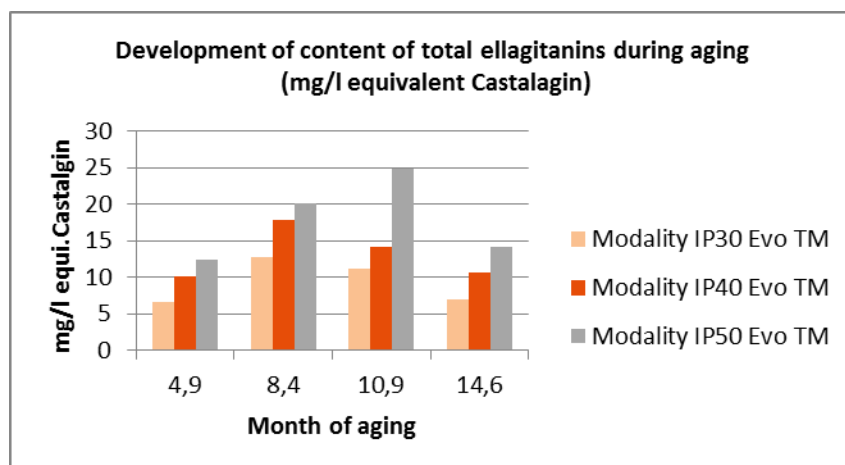
Since 2009, over **300 OAKSCAN® trials** have been carried out. Each time the tests have proved to be pertinent in the greatest vineyards in the world (France, USA, Spain, Italy ...) and on a wide scale of varieties (Chardonnay, Sauvignon Blanc, Merlot, Tempranillo, Syrah, Cabernet Sauvignon...).

*The two following examples illustrate the multiple areas in which Oakscan can be used, as well as the relevance of this tool in the wine aging process which is becoming more and more demanding and precise \**

### ▪ *How does the level of polyphenols in the wood impact the length of aging?*

*Three wood selections (IP30, IP 40, IP50) of French oak having undergone an identical toasting process were tested on a Syrah/Grenache (South Rhône Valley 2012).*

*Blind tastings were carried out by a panel of 10 tasters at 11 and 15 months of aging. For an objective of between 10 and 12 months aging, the best compromise was obtained with the Oakscan IP30 selection which presented a good expression of fruit and a good integration after 10 months aging. At 15 months, the IP50 selection showed a good protection of the fruit, a return to an aromatic balance and an optimal ratio of structure and tannic perception. A clear drop in the remaining ellagitannins, particularly with IP50 was noted, thus confirming a good integration of the wood tannins and the completion of aging after 14 months contact. It was also noted that the wine aged with IP50 was still taking wood at 11 months whereas the wines aged with IP30 and IP40 had started the phase in which the concentration of remaining ellagitannins begins to drop.*



▪ **How do two wood selections with different polyphenolic indexes produce two different wine profiles?**

*A 100% cabernet sauvignon wine (Chile Colchagua 2010) was aged for 14 months in two wood categories: with low potential (IP20) and high potential (IP50), all the wood being French oak having undergone an identical toasting process (Medium Classic). The third wine was aged in stainless steel barrels of the same size and was used as the reference wine.*

*The blind tasting by a panel made up of 11 members, revealed that the IP20 was more marked by vanilla than the IP50 which developed more toasted/smoky aromas. The fullness of the mouthfeel was more significant with the high potential wood. The effect on structure was clear with the two IP selections compared with the stainless steel barrel.*

*The chemical analyses confirmed the two sensory profiles perceived during the tasting : the IP20 rich in lactones and vanilla and low in smoky-toasted aroma markers (Syringol + Guaiacols + Furanic aldehydes) and which gained very few ellagitannins, and the IP50 low in lactones and vanilla, richer in smoky-toasted aroma markers and gaining a higher level of ellagitannins.*

\*The complete article « Precision and homogeneity of barrels selected with OakScan®: two examples of selection adapted to different wine profiles or aging objectives» by Nicolas Mourey, R&D Radoux can be downloaded from the following link : [http://www.radoux.fr/wp-content/uploads/2015/10/Article\\_N.Mourey-Oakscan\\_US.pdf](http://www.radoux.fr/wp-content/uploads/2015/10/Article_N.Mourey-Oakscan_US.pdf)

All these analyses, together with their unique chemical database on the composition of wood, has enabled Radoux to integrate all the parameters which have an impact during aging and to be as precise as possible when advising on the OAKSCAN® selection.

**An excellent knowledge of the raw material and its interaction with the wood is what makes Tonnellerie Radoux the essential partner in precision winemaking.**

Radoux, the reference in Barrel making

The Radoux Group has made its mark as a great name in barrel making, having won over the most prestigious wine and spirit producers the world over. With an annual turnover of 30 million euros of which 80% is in exports, the Radoux Group is represented all over the globe with its subsidiaries in South Africa, Australia, the USA and Spain. At the beginning of 2012 Radoux joined the TFF Group, the undisputed global leader in the production of wood containers for the aging of wines and spirits, as well as wood products for oenology.

## CONTACTS

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