What happen when you use OAK MASTER® (alternative infusion closures) into spirits?

The Spirits that adapt the use of the alternative infusion closures OAK MASTER®, find changes in their composition because of the addition of phenolic compounds and other molecules extracted from the wood. Such compounds include lignins, hydrolysable and condensed tannins, gallic acid, ellagic acid, aromatic carboxylic acids, and various aldehydes.

Different rates of extraction, depending mainly on the oak origin and toasting degree, is observed, reflecting sensory differences. Volatile phenols together with aldehydes, phenols and lactones showed an increase within 2 months. Ellagitannins were extracted faster during the first 4 weeks ; after 8 weeks an important decrease is observed. Lactones induced positive sweetness sensations, whereas furanic and guaiacol compounds influenced bitterness and astringency. Spicy and vanilla nuances related to eugenol, vanillin and other odorous chemicals are better balance from 18 weeks . The time of extraction of the released compounds varies depending mainly in the oak origins as the time for extraction is longer in French oak than in the American oak .

In the Oak Master® alternative closure range three types of toasting are used: light, medium and heavy. This is stage considered as having the most important influence on the chemical composition of oak wood. The thermal treatment causes thermo degradation of some components of oak wood, which produces numerous volatile compounds. Furanic compounds are formed through thermal degradation of carbohydrates; volatile phenols come from the thermal degradation of lignin and oak lactones are products of the dehydration of the acids present in wood. Medium toasting corresponds to the maximum synthesis of these volatile compounds.

The most potent contributors to overall oak aroma are compounds related to oak toasting: vanillin, furfural and 5-methylfurfural. Also an important interaction between sweetness perception and oak volatile compounds is also showed. Is perceived the sweetness perception more with higher levels of lactones, eugenol and vanillin compounds. The levels of these compounds are correlated positively with the perceived intensity of vanilla aroma. Woody overall character is positively correlated to guaiacol, methylguaiacol, eugenol, syringaldehyde, lactones and vanillin levels, which is reasonable since oak wood sensation is complex and influenced by the presence of various odour-active wood extractives. For example, whiskey lactone is an attribute that accounts for a woody and coconut character. Perceived spicy intensity is closely related to eugenol content, which is logical, since pure eugenol is described as clove-like .

GRAPPA TEST RESULTS

Period of infusion 6th March - 9th May

Temperature 15 degrees

Type of Grappa: young Grappa from red varieties (Cabernet Sauvignon, Cabernet Franc, Merlot and Malbec) distilled in a discontinuous pot - 48° alc.

American closure: has an intense color, sweet aromas at the nose and also at the taste. Grappa seems to be aged for many years.
Toasted aromas of wood with delicate notes of spices and balsamic.

French closure: color is more delicate and also at the taste we feel completely different kind of aroma, delicate note of vanilla and pungent note of alcohol. This kind of wood didn't cover the alcoholic power of this Grappa. Probably needs more time to give the best in our Grappa."

CEO Sammy Soriano

MACAULAY & CUMMING HERITAGE S.L

Avda. del Portet 42 , 03724 Moraira · Alicante España · UE

CIF/VAT reg. B-54817747

WWW.OAKMASTER.ES

WWW.MACAULAYCUMMING.COM

WWW.GLENOAKBEER.COM

phone:+34/626698776