

## ENARTIS NEWS

### ENARTIS OAK ALTERNATIVES: CONTRIBUTION, ADVANTAGES AND SELECTION

For centuries, winemakers have utilized oak barrels for making wine. Today, oak barrels are still considered the optimal treatment for high quality wines, however using them imposes some major challenges for winemakers. For this reason, alternative methods and tools have been developed which give winemakers greater control and flexibility with oak ageing.

#### WHAT DOES OAK CONTRIBUTE TO WINE?

When released into wine, wood compounds enhance structure and perceived sweetness, impact the aromatic profile, and can help color stabilization. More specifically:

- **Polyphenols and polysaccharides** increase structure and improve roundness. By reacting with wine polyphenols, they help stabilize color.
- **Aromatic compounds** contribute oak aromas: vanilla, toasted bread, spices, coffee, chocolate, coconut, bourbon, etc. The aromas produced depend on oak selection to some degree, but primarily on the toasting process. Toasting oak during barrel processing modifies the structure and chemical properties of wood. Increasing temperature and length of toasting will:
  - Reduce oak lactone content which contributes to fresh oak and coconut aromas.
  - Increase vanilla, caramel-like and roasted coffee aromas associated with vanillin, furfural, 4-methylfurfural and maltol. At heavy toast levels these compounds are replaced by spicy (eugenol, isoeugenol, 4-methylguaiacol) and smoky (4-methylguaiacol, guaiacol, 2-methylphenol) characters.

#### WHY USE BARREL ALTERNATIVES?

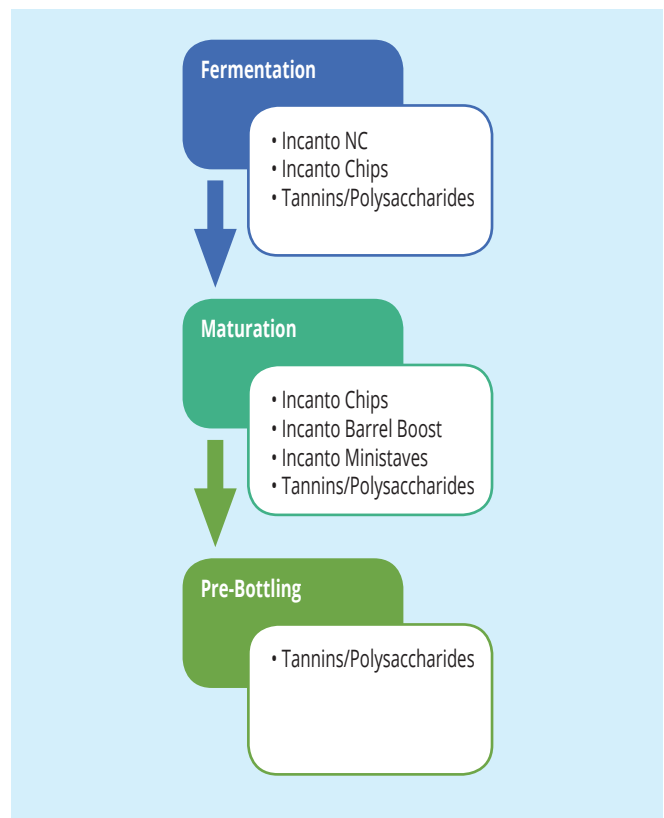
There are many reasons to consider oak alternatives:

- **Cost** is the most common reason for using barrel alternatives. Barrel alternatives significantly reduce oak investment, labor and timing.
- **Storage space** is considerably reduced when using tanks and oak alternatives to simulate oak ageing instead of barrels.
- **Quality** is more consistent and easier to check.
- **Risk of microbiological contamination** is reduced.
- **Ease of Use:** large volumes can be treated in tank, minimizing wine transfers and handling.

#### HOW TO SELECT THE CORRECT OAK ALTERNATIVE

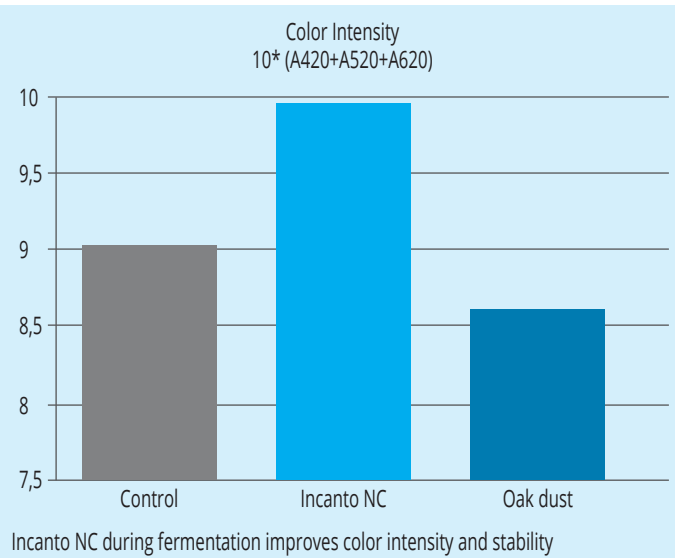
Defining the targeted wine profile, time available for ageing and budget help in selecting the perfect oak alternative.

Enartis offers different forms of oak alternatives. Each form has its appropriate application, depending on wine style and vinification phase.



## INCANTO NC

Incanto NC products are completely soluble formulations containing tannins mainly extracted from toasted oak and yeast polysaccharides. They mimic the effect of oak dust in fermentation while offering a few advantages: absence of solids that could damage mechanical parts of winery equipment, dosages 10 times smaller than typical oak powder, zero loss of color by solid absorption and reduced waste.



	Main Effect
Incanto NC White	Mimics untoasted oak treatment. Increases wine fruitiness.
Incanto NC	Mimics the effect of medium toasted oak powder. Enhances oak aromas and aromatic complexity.
Incanto NC Sweet	Increases wine fresh fruit aroma and provides an intense sensation of sweetness.
Incanto NC Red	Mimics the effect of medium-plus toasted oak powder or chips. Increases oak aroma.
Incanto NC SLI	Mimics untoasted oak treatment. Increases wine fruitiness and softness. Prolongs wine shelf-life.
Incanto NC Cherry	Enhances fresh red fruit notes.
Incanto NC Dark Chocolate	Mimics French heavy toasted oak dust treatment. Increases wine aroma complexity.
Incanto NC Prowine	Mimics the effect of treatment with medium-plus-toasted French oak alternatives.

## INCANTO CHIPS

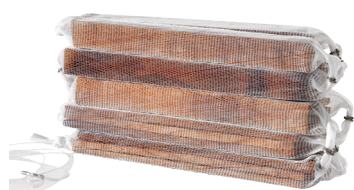
Produced from selected wood of French and American oak, Incanto chips are toasted using a unique and original process which employs a progressive heating scheme that results in a deep and homogenous toast. Their size is about 2-4 mm and they provide best results after 4-6 weeks of contact. Incanto chips are available in different toasting levels. Their names are indicative of the expected aroma contribution.



## INCANTO MINISTAVES

Incanto Ministaves are produced using the same process adopted for Incanto Chips. They are used for mimicking the effects of barrel ageing: same aromatic complexity and longevity, same soft structure. Their size is approximately 25 cm long, 2.5-5 cm wide and 0.9 cm thick. Suggested contact time is 4-6 months. Dosages can vary from 1-5 g/hL.

## INCANTO BARREL BOOST



Incanto Barrel Boost consists of 24 ministaves in an infusion-bag chain designed to extend barrel life. One chain per barrel equates to the addition of 25% new toasted oak. The

optimum contact time is from 4-6 months.

## TANNINS ENARTISTAN

The EnartisTan range includes several tannins extracted from oak that can be used to refine wine throughout maturation until pre-bottling. They are produced from the same wood used for oak barrels. After seasoning and toasting, tannins are extracted, concentrated and spray-dried to maintain the aromatic and sensory properties of oak. The combined use of yeast polysaccharides completes the “oak ageing” effect of tannins.

EnartisTan Tannins extracted from oak

	Structure	Astringency	Softness	Aroma	Aroma description
Cœur de Chêne	◆◆	◆◆	◆◆◆	◆◆◆◆	Vanilla, caramel, spices
Dark Chocolate	◆◆◆	◆	◆◆◆◆	◆◆◆◆◆	Cocoa, toasted hazelnut, vanilla
Elevage	◆◆◆	◆◆◆	◆◆	◆◆◆	Caramel, licorice, vanilla
Extra	◆◆	◆	◆◆◆◆	◆◆◆◆◆	Vanilla, caramel, cocoa, coffee
Napa	◆◆◆	◆	◆◆◆◆	◆◆◆◆◆	Coconut, caramel, coffee, cocoa
Rich	◆◆	◆◆	◆	◆◆	Toasted wood, coffee, spices
Superoak	◆◆	◆	◆◆	◆◆	Vanilla, caramel, hay
Toffee	◆◆◆◆	◆◆	◆◆◆	◆◆◆◆	Coffee, caramel, toasted wood
Vanilla	◆◆◆◆	◆◆	◆◆◆	◆◆◆◆	Vanilla, coconut, cream
Unico #1	◆◆◆◆	◆	◆◆◆◆	◆◆◆◆◆◆	Vanilla, cocoa, toasted wood, spices

## HOW CAN I CHOOSE WHAT I LIKE?

The extraction of oak compounds as well as the sensory impact on wine depends on many variables including the physiochemical characteristics of wine (pH, alcohol, titratable acidity, volatile acidity and SO<sub>2</sub>), wine buffer capacity, storage temperature, contact time, etc. When deciding which oak alternative to use, we always recommend setting up trials. This way, winemakers can base their oak alternative decision on accurate data and tasting.

### Chips & Ministaves

- Use a 0.750 L bottle for each sample.
- Select desired dosages (2-5 g/L).
- Write the date, wine lot, Incanto Oak Chip name and dosage on a label for each sample. Prepare a control sample bottle without oak chips.
- Calculate the amount of Incanto Oak Chips for each 0.750 L wine sample: (dosage g/L) x 0.750 L = g of Incanto Oak Chips.
- Weigh Incanto Oak Chips, add to sample bottle and fill with wine up to 0.750 L.
- To prevent potential oxidation, add 5 mg/L SO<sub>2</sub> at this time.
- After 3-4 weeks contact, the samples are ready to be tasted.

*Tip: consider blending samples to determine the optimum Incanto Oak Chip blend.*

### Tannins & Incanto NC

- Dissolve 1 g product in 100 mL neutral alcohol-water solution (~ 13%v/v).
- Write the date, wine lot, Incanto or EnartisTan name and dosage on a label for each sample. Prepare a control sample bottle with untreated wine.
- Fill samples with wine up to 80% of final volume, leaving space for the addition
- Add the treatment solution: 0.1 mL of solution in 100 mL of wine corresponds to the addition of 1 g of tannin or polysaccharide in 1 hL of wine.
- Fill with wine to the final volume.
- Mix homogenously.
- Tasting can be done immediately after addition.

### Available Incanto Oak Alternatives

	Description	Chips	Ministaves	Barrel Boost
<b>Incanto Natural</b>	Untoasted French oak	✓		
<b>Incanto SLI</b>	Untoasted American oak	✓		
<b>Incanto Cream</b>	Medium toasted French oak	✓	✓	✓
<b>Incanto Sweet</b>	Medium toasted French oak	✓		
<b>Incanto Special Fruit</b>	Medium toasted French oak	✓	✓	✓
<b>Incanto Vanilla</b>	Medium toasted American oak	✓	✓	✓
<b>Incanto Caramel</b>	Medium toasted French oak	✓	✓	✓
<b>Incanto BRQ</b>	Medium-plus toasted French oak	✓		
<b>Incanto Spice</b>	French & American oak, various toast levels	✓		
<b>Incanto Black Spice</b>	Heavy toasted French oak	✓		
<b>Incanto Toffee</b>	Medium-plus toasted French oak	✓	✓	✓
<b>Incanto Complexity</b>	Heavy toasted French oak	✓		
<b>Incanto Dark Chocolate</b>	Medium-plus toasted French oak	✓	✓	✓