





# **HARVEST 2023**



### Our selection



#### **IOC BE FRESH TM**

Natural yeast to balance the freshness of ripe red grapes... without producing sulphites

- Reveals the aromatic freshness in ripe grapes (complex fruity esters)
- No capacity to form SO<sub>2</sub> + very low production of acetaldehyde = drastic decrease of sulphites in wines
- Avoids the reduction of wines in fermentation (rare and very low production of H<sub>2</sub>S)



#### NATJJATM & NATJJA FIZZ TM

Improves the wellness of the yeast and optimises its aromatic development capacities

- High quality 100% organic nitrogen source for a balanced assimilation by the yeast
- Contains natural anti-free radical elements that help reduce oxidative stress in yeast and preserve wine aromas
- Improves the overall wellness of the yeast towards a safe fermentation and a better revelation of the aromas of your wines



# **Bioprotection**



#### IOC GAÏA TM

Pre-fermentation bioprotection acclaimed all over the world

- Non-fermentative Metschnikowia fructicola yeast the most active against undesirable yeasts and acetic bacteria
- Avoids the production of acetic acid and ethyl acetate in the pre-fermentation phase
- Proven capacity for biosanitation of harvesting equipment (machine, sorting table, etc.)

#### **IOC CALYPSO TM**

Optimizes and secures the cold stabulation process on grape lees

- Non-fermentative Metschnikowia pulcherrima yeast with a high capacity for cold implantation - reduces the risk of AF start on grape lees
- High enzymatic activity for varietal aromatic revelation (thiols)
- Contributes effectively to the preservation of revealed aromas

As a complement or alternative to the action of sulphites



#### Qi FINE TM

The best alternative to PVPP used in gape juice

- Synergy between plant macromolecules for the adsorption of oxidizable and coloured polyphenols
- Anti-radical role (antioxidant) of specific chitosan: preservation of fruity aromas (especially thiols)
- High electrical charge density: excellent fining capacity

#### **Pre-fermentative bioprotection**

Usable in Organic EU and NOP winemaking

**IOC CALYPSO** TM



Protection of musts. Non-fermentative *Metschnikowia pulcherrima* helps intensify and protect aromas prior to fermentation.



IOC GAÏA TM



Harvest protection. Non-fermentative *Metschnikowia fructicola* helps combat the development of harmful indigenous flora.



**IOC BOREAL** TM



Bio-acidification of musts. Lachancea thermotolerans yeast capable of producing high levels of lactic acid to rebalance the freshness of wines. A natural alternative to acidifying additives. **New** 

# Enzymatic treatment

MYZYM AROMA TM	NOP	Brings out varietal aromas from precursors.
MYZYM CLARIF TM	* NOP	Clarifies musts.
MYZYM ULTRA CLARIF TM	* NOP	Clarifies musts in difficult conditions.
MYZYM CLEAR TM	NOP	Clarifies musts and wines affected by Botrytis & enhances filterability.
MYZYM ÉLEVAGE TM	NOP	Enhances richness and aromas by accelerated yeast autolysis.
MYZYM EXTRACT TM	* NOP	Extracts colour and enhances structure.
MYZYM ULTRA EXTRACT TM	* NOP	Extracts colour and enhances structure in difficult conditions.
MYZYM MPF TM	* NOP	Extracts colour and aromatic precursors in cold maceration.
MYZYM READY CLARIFICATION TM	•* NOP	Liquid formulation for clarifying musts in difficult conditions.
MYZYM READY EXTRACTION TM	•* NOP	Concentrated liquid formulation for grape maceration (increased colour and volume in the mouth). <b>New</b>
MYZYM READY EXTREM ™ •	•* NOP	Liquid formulation for clarifying in extreme conditions (cold, hot, very pectic juices).
MYZYM READY PRESS TM	* NOP	Liquid formulation for increasing the yield during harvest pressing for producing white or rosé wines.
MYZYM READY SPIRIT TM	* NOP	Liquid formulation for pressing and clarifying musts for distillation products (low PME).
MYZYM READY'UP TM	* NOP	Dedicated liquid formulation for clarification in flotation processes.
MYZYM RED FRUITS TM	NOP	Extracts and brings out aromatic precursors in red grapes.
MYZYM WHITE FRUITS TM	NOP	Extracts and brings out aromatic precursors in white grapes.

<sup>• =</sup> liquid formulation / • = Products that may be used in ORGANIC (BIO) winemaking processes (EU) in line with the (EU) COMMISSION EXECUTIVE REGULATION (EU) No 203/2012 of 8 March 2012 and Commission Implementing Regulation No 2018/1584 of 22 October 2018 amending Regulation (EC) No 889/2008 laying down detailed rules for the application of Council Regulation (EC) No 834/2007; the latter two have been repealed and replaced by Regulation (EU) No 2018/848 and its secondary acts (delegated regulation and implementing regulation) and the NOP Regulation for the USA as regards organic wine. It is your responsibility to contact your certification body to check compliance with your charter.\* = under certain conditions, check with our <u>list of usable products in ORGANIC winemaking</u> available on our website.

Clarifying ar	d fining musts
BENT'UPTM	Activated sodium bentonite powder enhances compaction of surface flotation sedimer
BENTOSTAB™	Activated sodium-calcium bentonite comes in powder and granule form, for deproteinising musts as well as white and rosé wines.
CLARIFIANT NAT TM	A preparation made up of a non-activated bentonite, dedicated to riddling an clarifying sparkling wines produced along traditional method lines.
COLORPROTECT V TM	A combination of bentonite, PVPP and (pea) plant-based protein for preventive an curative treatment of oxidation.
FRESHPROTECTIM	A combination of bentonite, PVPP, cellulose and arabic gum for fining musts and wine to correct brown and oxidised colours. Corrects bitterness.
GEL'UP <sup>TM</sup>	Porcine gelatine in powder form, soluble when heated.
INOBENT NAT TM	<ul> <li>Natural sodium-calcium bentonite dedicated to flotation, in granules, for efficien clarification with moderate deproteinisation.</li> </ul>
INOFINE V TM INOFINE V MES TM	Plant-based protein (100% pea) eliminates oxidizable and oxidized polyphenols for clarifying and fining musts in flotation. INOFINE V $^{\text{TM}}$ and INOFINE V $^{\text{MES}}$ $^{\text{TM}}$ are compatible for clarifying and fining musts in flotation.
PHENOX-FREETM	A dedicated inactivated yeast/PVVP - based formulation which reduces the need for PVPP, while optimizing efficacy. Combats oxidation of white and rosé musts, as well a correcting colours, bitterness and dryness. <b>New</b>
POLYOXYL™	A combination of bentonite and PVPP for a moderate and clarifying deproteinisation effect. Enhances taste and sensory profiles of musts from affected harvests (mildew).
PVPP POUDRE	Used for fining musts and wines, PVPP shows great affinity for polyphenols. It provide preventive and curative treatment for oxidation of wines, while reducing bitterness.
Qi FINE TM Qi FINE MES TM	A combination of chitosan and (pea) plant-based protein, ideal for fining white and rosé musts, enhancing taste properties and reducing astringency and bitterness, while ensuring antioxidant protection.
Qi-No[Ox] ™	A combination of (pea) plant-based protein, chitosan and ultrapure bentonite used for fining musts and wines to correct oxidised colours.
Qi UP XC TM Qi UP XC MES TM	A biopolymer of fungal origin, chitosan is used to clarify white, rosé and red  * musts. It features excellent antioxidant properties as a result of interactions with  * oxidised and oxidisable polyphenols, metal chelation (iron and copper) and  it and its in all interactions for a publication.

# Oxidative stability of must: lees alternatives

indirectly preserving thiols.

TRAP'METALSTM

its action in eliminating free radicals.

FULLPROTECTIM	NOP	Dedicated inactivated yeasts and tannin to protect colour and aromas of white and rosé wines from oxidation occurring during pre-fermentation stages.
<b>GLUTAROM</b> <sup>TM</sup>	NOP	Inactivated yeasts naturally rich in glutathione. Preserves the aromas and freshness of white wines and at the same time prevents premature aromatic ageing.
GLUTAROM EXTRA TM	NOP	A formulation with high glutathione content that is pro-active in preserving wines low in sulphites.

A combination of PVI/PVP, yeast cell walls and chitosan, used to trap metals thereby

### **Sulphiting operations**

BISULFITE D'AMMONIUM	•	Ammonium bisulphite solution at 150 g/L of SO <sub>2</sub> .
INODOSE GRANULÉS TM	•	Odourless granules, release a precise dose of $SO_2$ via hydrodispersibility and come in packs of 50 g, 100 g and 400 g.
INODOSE 2 ou 5 TM	•	Potassium metabisulphite-based effervescent tablets release 2 or 5 g of SO <sub>2</sub> .
METABISULFITE DE POTASSIUM	•	Used for sulphiting fresh harvests, musts and wines. For 1 g of $SO_2$ , add 2 g of potassium metabisulphite.
SULFITANINTM	•	A solution of ammonium bisulphite and Tara tannin at 100 g/L used for sulphiting musts.
SULFIVIN A TM	•	Solutions of ammonium bisulphite at 100, 180, 400 and 600 g/L of SO <sub>2</sub> .
SULFIVIN K TM	• •	Solutions of potassium bisulphite at 50, 100, 150 and 180 g/L of $SO_2$ .

#### **Decolourising and decontaminating musts**

ACTICARBONE / CARBION ENO TM	•* NOP*	Carbon with high decolourising capacity, made up of fine particles for ease-of-use in flotation.
CARBION GRANULÉS TM	•	Activated plant-based carbon. Ideal for decolourising stained musts and wines.
CARBOCLEANTM	•* NOP*	Highly decolourising and aroma-friendly charcoal. New
FLAVOCLEANTM	NOP*	Activated plant-based carbon, with high deodorizing capacity. Corrects organoleptic characteristics of musts affected by fungi such as rot and powdery mildew.
OTACLEANTM	NOP*	Activated plant-based carbon, with high deodorizing capacity for musts contaminated by ochratoxin A.

### Yeast inoculation: Unconventional yeasts

Usable in organic EU and NOP winemaking





Rebalances aromatic freshness in concentrated harvests, while limiting sulphite content. Prevents the reduction of wines.



**IOC BE FRUITS TM** 



Allows the fruity esters to be revealed without producing  $SO_2$ . For producing healthy, clear wines with intense aromas of fresh fruit, while limiting sulphite content.



**IOC BE THIOLS TM** 



Combines strong expression of fruity thiols with an inability to produce  $SO_2$ .



**IOC DYNAMIX** TM



A complex mixture of yeasts to bring out terroir potential and allow grapes to achieve their full expression, in complete safety.

### Yeast inoculation: Specific yeasts

Usable in organic EU and NOP winemaking

IOC 18-2007 TM	The reference in Champagne for alcoholic fermentation and secondary fermentation. Excellent adaptation to the most difficult conditions. Rapidly established, it ensures complete breakdown of sugars.
IOC B 2000 TM	Fosters fruity, aromatic expression for producing fresh, aromatic wines. Particularly interesting for grape varieties poor in varietal precursors.
IOC B 3000 TM	Brings out the intensity and aromatic complexity of wines, with notes of yellow fruit and flowers, while contributing to full-bodiedness and roundness.
IOC BIO TM	Certified ORGANIC, preserves typicality of still and sparkling wines.
IOC FRESH ROSÉ TM	Enhances the floral and varietal expression of rosé wines. Brings out aromatic intensity with notes of flowers, citrus fruit and spices.
IOC FIZZ TM	For sparkling winemaking using the closed tank method. Ensures rapid and complete secondary fermentation.
IOC FIZZ+ TM	Contributes to the aromatic intensity of sparkling wines produced using the closed tank method. Excellent fermentation capacities in both secondary fermentation and first fermentation.
IOC INFINI'TWICE TM	Perfect balance between body and freshness in white wines, now without limits.
IOC PRIMROUGE R 9001 TM	Ideal for producing round and aromatic wines, typical of red fruits and confectionery. Resulting wines have better colouring, a clear, fruity nose and are supple on the palate.
IOC R 9002 TM	Ideal for producing well-structured wines for laying down. Brings out aromas intermingling spices and black fruits. Enhances colour fixing phenomena.
IOC R 9008 TM	Ideal for producing wines with complex ripe fruit aromas and significant full-bodiedness. Helps limit the sensation of dryness and bitterness.
IOC RÉVÉLATION TERROIR TM	Ideal for preserving the intensity of colour and helps bring out varietal fruity aroma, finesse and elegance.
IOC RÉVÉLATION THIOLS TM	Fosters the full expression of fruity thiols, for a superior aromatic potential, with notes of citrus and passion fruit, while limiting plant-based notes.
IOC TWICE TM	Ideal for a perfect balance between roundness/full-bodiedness and final freshness. Fresh and complex fruity aromas.

#### Structuring in fermentation: lees alternatives

Allows to work on the attack and the mid-palate of red wines with a sense of volume and smoothness. Contributes to the impression of maturity. New

Allows to work on the finish of red wines by reducing the sensations of astringency

and greenness. Contributes to the impression of freshness. New

# **Optimising fermentation**

<b>ACTICLEAN</b> <sup>TM</sup>		Detoxicant inactivated yeasts and cellulose medium to prevent or curb sluggish or stuck fermentations.
ACTIVIT	•*	A nutrient made up of di-ammonium phosphate, inactivated yeasts and thiamine, ensures regular development of yeasts in the event of significant deficiency.
ACTIVIT NAT TM	* NOP	A 100%-organic nitrogen nutrient recommended for preventing sulphurous odours, facilitating alcoholic fermentation and bringing out varietal thiols.
ACTIVIT O TM	•*	A complete 100%-organic nitrogen nutrient with thiamine for high-quality fermentation and good aromatic expression, while limiting production of SO <sub>2</sub> .
ACTIPROTECT+TM	•* NOP	A protective agent which strengthens the yeast's plasma membrane during rehydration. Better prepared, it consequently produces fewer undesirable compounds.
ACTIPROTECT ROSÉ TM	•* NOP	A latest-generation yeast protective agent that helps release precursors of thiols aromas to bring out the aromatic character of rosé wines.
ACTIVIT SAFE TM	•* NOP	Nutrient and detoxifier for the final phases of alcoholic fermentation.
AROMACTIVIT 1 & 2 TM	*	Synergy of nutritional action with 2 complementary nutrients:  • just after yeasting: AROMACTIVIT 1 ™ improves the yeast biomass.  • at 1/3 AF: AROMACTIVIT 2 ™ redirects metabolic flows towards aromatic biosynthesis.
CELLCLEANTM	•* NOP	Yeast cell wall with a high adsorption capacity for fermentation inhibitors. Preventive use during fermentation or in case of stuck fermentation.
NATJJA™	•*	Improves the healthiness of yeast and its metabolism for bringing out aromas. Counters oxidant stress undergone by the yeast. <b>New</b>
NATJJA FIZZ <sup>TM</sup>	•*	Improves the healthiness of yeast and its metabolism for bringing out aromas in secondary fermentation conditions. Counters oxidant stress undergone by the yeast during this stage. <b>New</b>

**VITISTART**<sup>TM</sup>

A complex nutrient that is a good compromise between a combined nitrogen source and cellulose source, particularly well-suited for conditions of white and rosé musts.

		Nitrogen source		Added assimilable e nitrogen (mg/L) for 40g/hL added*		Ammoniacal nitrogen		Nutrients of yeast origin				Others			
		Organic	Mineral	Direct calculation	Technical equivalent (kinetic)	Phosphates	Sulphates	Aminoacids	Assimilable peptides	Sterols and lipids	Minerals	Vitamins	Added	Cellulose	Chitosane
Yeast	ACTIPROTECT+TM			na	na			na	na	***	**	**			
Yeast	ACTIPROTECT ROSÉ ™			na	na			na	na	***	***	**			
sory	NATJJA™	***		13,5	35			**	**	*	***	** **			**
Optimizers of sensory metabolism	NATJJA FIZZ ™	***		13,5	35			** **	**	*	***	** **			*
nizers of sen metabolism	AROMACTIVIT 1 ™	***						**	**	*	**	** **	**		
Optir	AROMACTIVIT 2 ™	***	***	38	53	✓		***	*	*	**	** **	**		
43.45	ACTIVIT 0 ™	***		17	45			***	*	*	***	***	***		
Organic nutrients	ACTIVIT NAT ™	***		17	45			***	*	*	***	***			
0 =	ACTIVIT SAFE ™	***		8	20			***	*	**	**	**			
ed	ACTIVIT™	**	***	52	56	✓		**			**	**	**		
Mixed	VITISTART™	*	**	46	48	✓	✓	*			*	**	**	**	
Detoxicants	ACTICLEAN <sup>TM</sup>	*		1,5	4			*			*	**		** **	
Detox	CELLCLEANTM			na	na			na	na	*	**	**			

<sup>\*</sup> For calculation of nutrient addition, please use equivalent nitrogen value

# **Malolactic fermentation**

EXTRAFLORE COMPLEXITY TM (formerly EXTRAFLORE)	NOP	Controls malolactic fermentation and sensory complexity in wines.				
EXTRAFLORE CO-IN' TM (formerly INOFLORE)	NOP	For fruity wines in co-inoculation.				
EXTRAFLORE PURE FRUIT TM	NOP	Purity of fruity notes and control of malolactic fermentation in difficult conditions.				
INOBACTERTM	NOP	Malolactic fermentation of musts and wines with very low pH.				
MAXIFLORE ELITE TM	NOP	Contributes to structure and balance between notes of ripe fruit and spices.				
MAXIFLORE SATINE TM	NOP	Reduces astringency and prevents buttery aromas.				
NUTRIFLORE FML TM	NOP	Optimised nutrient for accelerating malolactic fermentation.				
NUTRIFLORE PDC TM	NOP	Dedicated nutrient for optimising the execution of malolactic starter phases.				



### GUIDE TO CHOOSING BACTERIA

			EXTRAFLORE CO-IN' <sup>TM</sup>	EXTRAFLORE COMPLEXITY TM	EXTRAFLORE PURE FRUIT <sup>TM</sup>	MAXIFLORE SATINE™	MAXIFLORE ELITE™	INOBACTER <sup>TIM</sup>
	Type of product		MBR (direct inoculation)	MBR (direct inoculation)	MBR (direct inoculation)	1-Step™ (rapid acclimatisation)	1-Step™ (rapid accilmatisation)	Standard (starter phase)
	Simplicity of use		***	***	***	***	***	*
	Co-inoculation		***	*	***	***	**	*
	Sequential inoc	culation	*	***	***	***	***	***
Conditions of use		Application parameters	< 13,5 % vol	< 14,5 % vol	< 16,5 % vol	< 16% vol	< 15,5 % vol	< 13,5 % vol
	Application	рН	> 3,25	> 3,2	> 3,2	> 3,25	> 3,2	> 2,9
	parameters	SO <sub>2</sub> tot	< 60 mg/L	< 50 mg/L	< 50 mg/L	< 60 mg/L	< 60 mg/L	< 60 mg/L
		Temp	18℃-26℃	18℃-26℃	15℃-27℃	18℃-26℃	18℃-26℃	18℃-22℃
	Resistance to polyphenols		**	**	***	***	**	
	Aromatic complexity		***	***	**	**	***	***
	Diacetyl (buttery notes)		Nothing in co- inoculation	Average	Very low	Verylow	Significant	Verylow
Sensory profile	Spices		*	***	*	**	***	
	Fruity		***	**	***	***	**	***
	Roundness		**		***	***	**	***
	Structure		*	***	**	***	***	
	White wine		**	**	**	**	**	***
	Red wine		***	***	***	***	***	*
OEnological application	Rosé wine		**	*	***	**	*	**
	Base wine		*	*	*	*	*	***
	Early wine		***	*	***	**	*	*

#### Tannins or chips? Each process has its solution!

### Tannins in winemaking

ESSENTIAL ANTIOXIDANT TM	* NOP	Gallic tannin with remarkable antioxidant properties. Contributing neither astringency nor bitterness, it is an excellent alternative for reducing $SO_2$ doses.
FULLCOLORTM	* NOP	Synergetic effect of ellagic, proanthocyanidin tannins and yeast polysaccharides for enhanced stabilisation of the colouring material and heightened taste characteristics in wine (body, bringing out fruity aromas and aromatic freshness).
MANN BOUQUET R16 TM	* NOP	Synergetic effect of ellagic, proanthocyanidin (grape) tannins and inactivated yeasts rich in manno-proteins to enhance the sensation of full-bodiedness and bring out fruity aromas.
MANN BOUQUET B19 TM	NOP	Synergetic effect of proanthocyanidin tannins and inactivated yeasts rich in glutathione for more aromatic freshness and complexity on the palate.
TANIN CRISTALLIN TM	* NOP	Tara tannin, moderate antioxidant action. Enhances the fining process.
TANIN SR™	* NOP	Proanthocyanidin tannin, sacrificial effect to preserve the grapes' tannins.
TANIN SR TERROIR TM	* NOP	A combination of proanthocyanidin and ellagic tannins which improves the structure of wines and acts on the body.
TANIN BOUQUET R36 TM	* NOP	A combination of proanthocyanidin and ellagic tannins which heightens fruity aromas.
	*	A proanthocyanidin tannin which compensates for imbalance in the grape's

### Winemaking chips

 $VOLUTAN^{TM}$ 

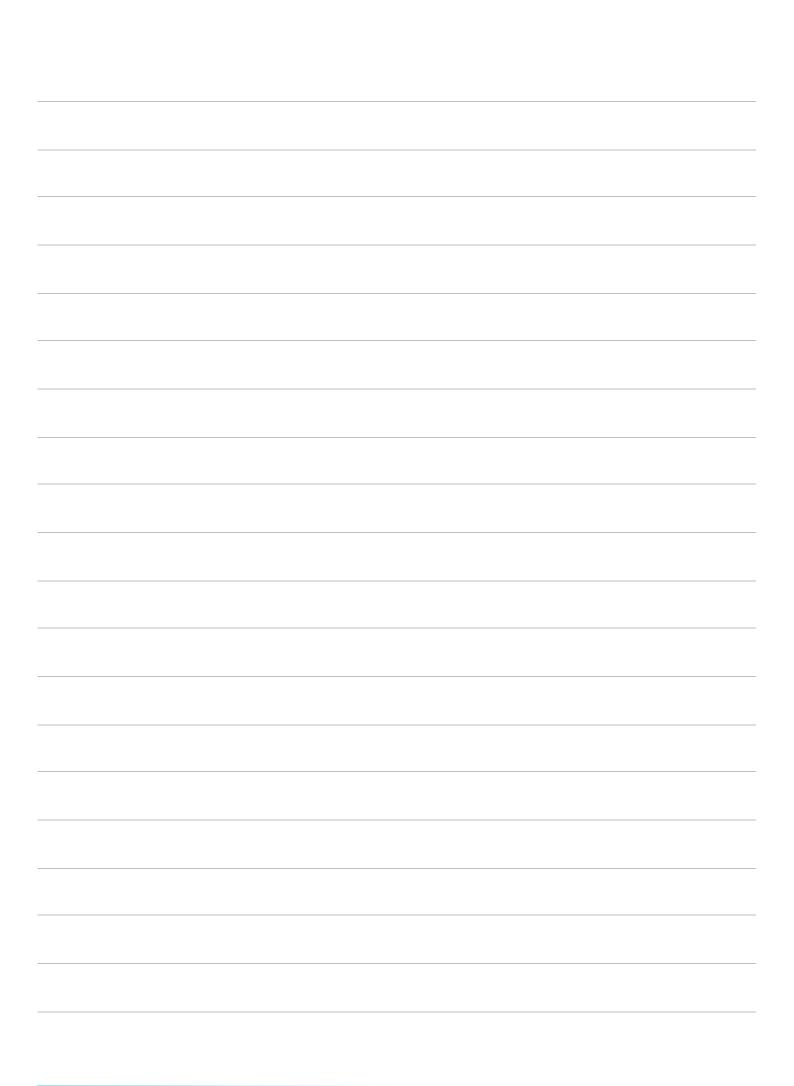


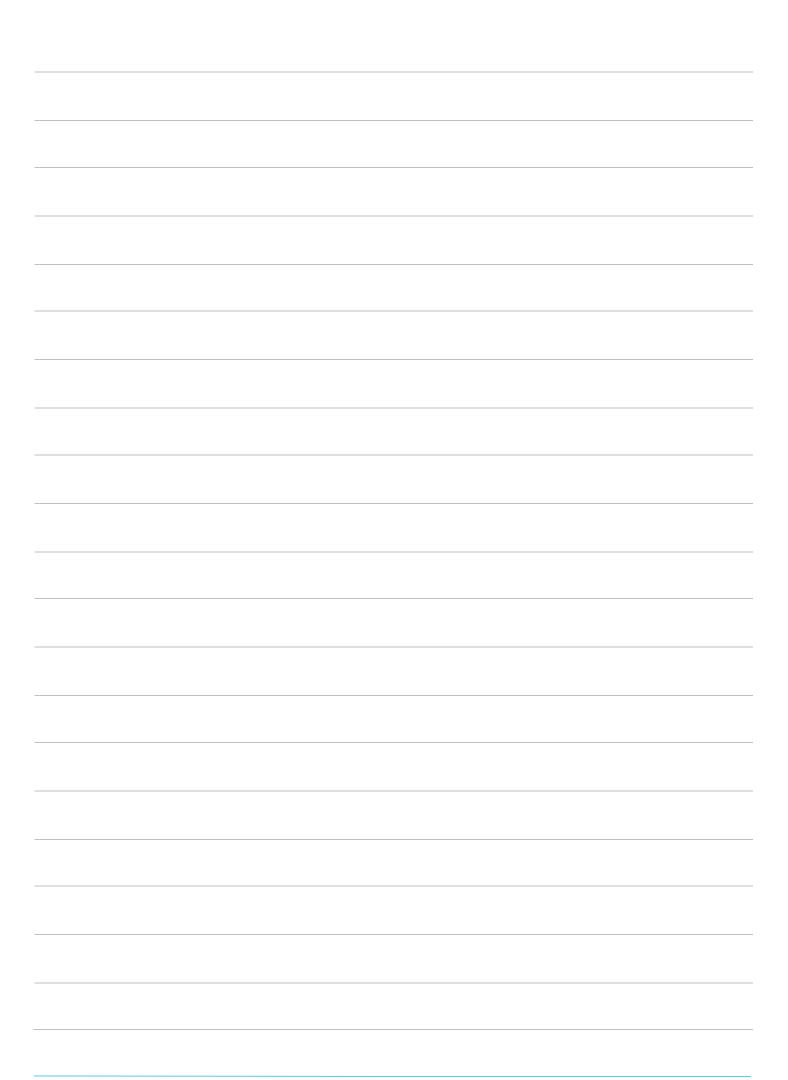
#### A recipe to suit your aromatic profile (chips and staves)

combinations.

BALANCE & STRUCTURE TM	NOP	For imbalanced matrices, masks plant characteristics.
CHOC & TOASTED TM	NOP	Chocolate and grilled notes, strong sweetening power.
FRUIT & SOFT TM	NOP	Respects fruit, sweetness and discreet vanilla notes.
FULL & COMPLEX TM	NOP	Fullness, sweetness, toasted notes and aromatic complexity.
RICH & SUBTLE TM	NOP	Aromatic complexity, moka notes and caramel. Refreshes fruity notes.
SWEET & FRESH TM	NOP	100% fresh wood, provides structure.

natural tannins. Stabilise colour by forming tannin/anthocyanin







IOC ZI de Mardeuil BP 25 - 51201 - EPERNAY Cedex - FRANCE Tel. +33 (0)3 26 51 96 00 ioc@iocwine.com

• @IOCforWine

www.ioc.eu.com