



FINE NORTHERN OAK

★ THE BEST OF AMERICAN OAK

OIS & ASSOCIATES



OIS & Associates

INTRODUCTION



A premium producer of American oak alternatives, FNO has more than a decade of experience in:

- Sourcing top-quality fine grain white oak
- Controlling wood seasoning
- Implementing precise toasting protocols

Part of SEGUIN MOREAU GROUP:



Three unique **ATTRIBUTES** that
set FNO apart
from the competition in the
marketplace



Where we
Source



How we
Season



How we Toast



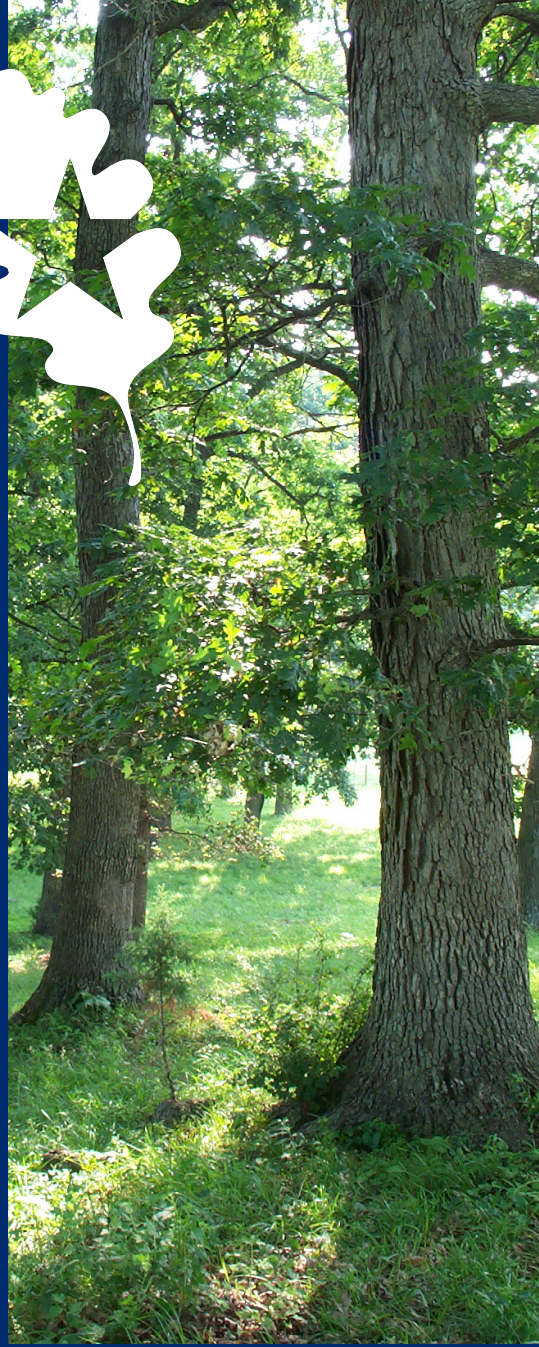


Where
we
Source

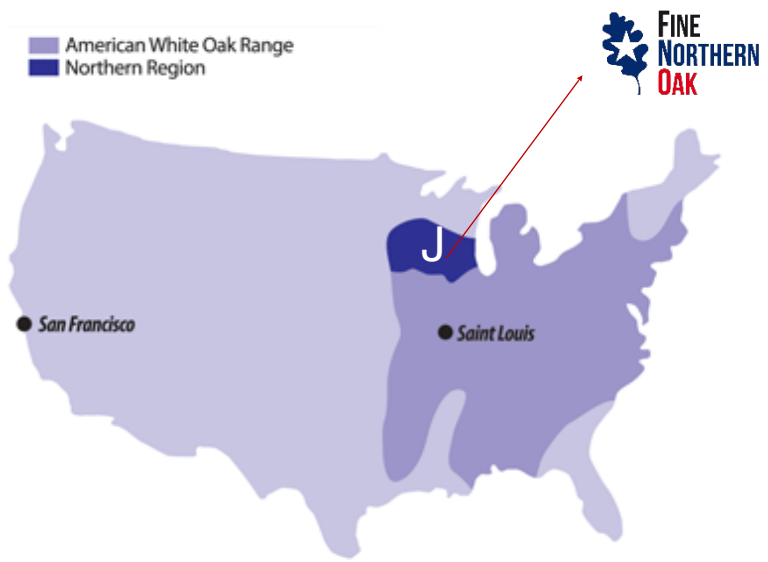
Terroir AND OAK SOURCING




We only source oak from the northernmost region of the American white oak range.

The long winter season in states like Minnesota lead to short growing seasons, which creates tighter grain for a more elegant, barrel-like profile.



THE BEST OF AMERICAN OAK



-  LONG WINTER SEASON IN MINNESOTA
-  FINE GRAIN
-  ELEGANT PROFILE CLOSER TO THE BARREL INFLUENCE

The best quality

100-year-old trees

Barrel-quality logs arrive at nearby stave mills

Narrow staves that do not meet barrel staves sizes are sold to FNO consistency

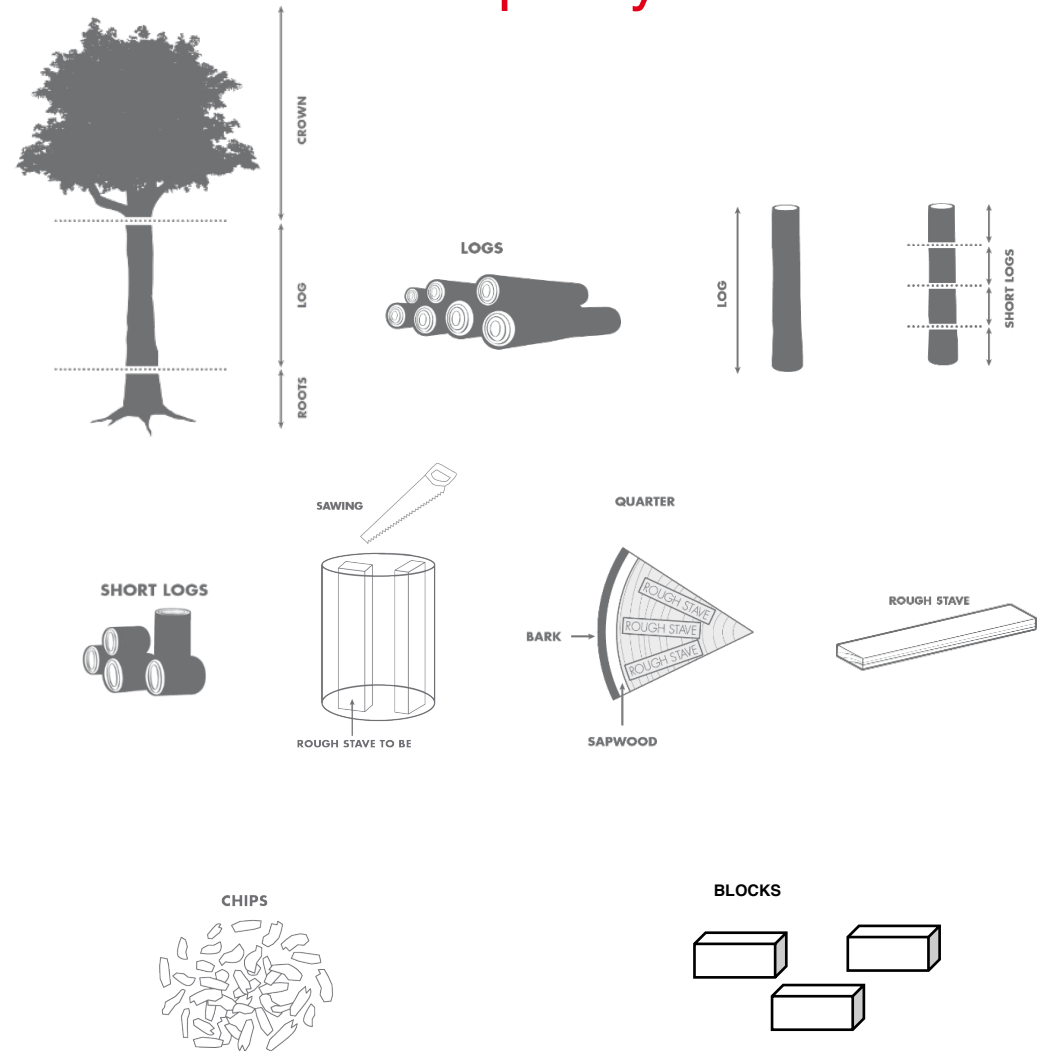
FNO is proud to work with leading stave companies, renowned for their quality fine grain oak

Long term contract with suppliers

10+ years sourcing from the same suppliers



Barrel quality wood





HOW WE SEASON



THE BEST OF AMERICAN OAK



BARREL QUALITY WOOD



LONG TOASTING

SEASONING PROCESS

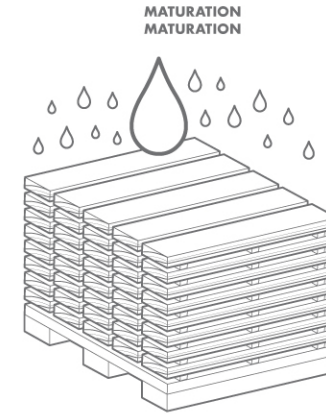






The rough staves are set aside for FNO's alternatives

The small lots are air-dried and seasoned for two Minnesota winters


The fluctuations of warmth and cold, along with dry and wet weather rinses out the harsh tannins of the wood, providing a softer profile

Barrel quality wood



-  2 MINNESOTA winters
-  AIR-DRIED
-  24 MONTHS MINIMUM GUARANTEED
-  SIGNIFICANT TEMPERATURE VARIATIONS





HOW WE TOAST



THE BEST OF AMERICAN OAK

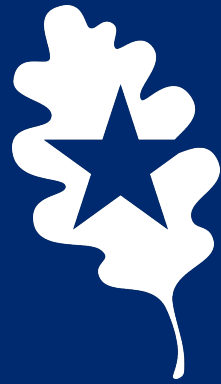


BARREL QUALITY WOOD



LONG TOASTING

TOASTING PROTOCOLS



Toasting in convection ovens in our own facility.

Extended time at lower temperature

-Deeper and softer toasting
in convection ovens

Products are cut before toasting

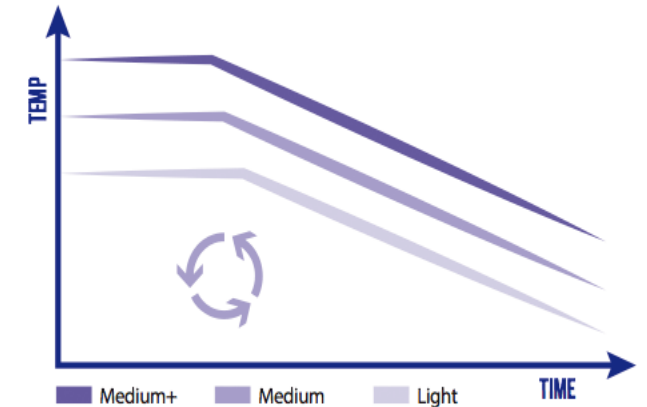
-maximum impact

Cool down naturally, without
opening the oven door

LONG TOASTING

Main toast levels available:

- Light
- Medium
- Medium Plus
- Intense for Chips

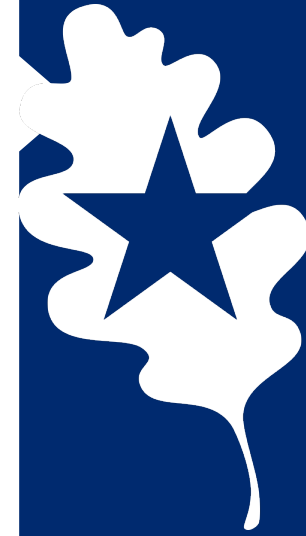


improves mouthfeel



brings volume and sweetness to the wine





PRODUCT RANGE



THE BEST OF AMERICAN OAK

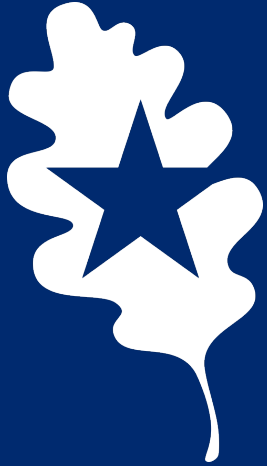


BARREL QUALITY WOOD



LONG TOASTING

FULL PRODUCT RANGE



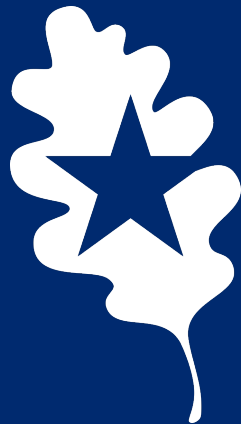
PRODUCT	TOAST	PACKAGING
FNO American Oak CHIPS	L, M, Intense	9kg infusion bag
FNO French Touch (Blend) Chips	HOUSE	9kg infusion bag
FNO American Oak BLOCKS	M,M+	9kg infusion bag
Acacia CHIPS <i>Selected by FNO</i>	M	9kg infusion bag
French Oak CHIPS <i>Selected by FNO</i>	M,M+	10kg infusion bag
French Oak BLOCKS <i>Selected by FNO</i>	M,M+	10kg infusion bag



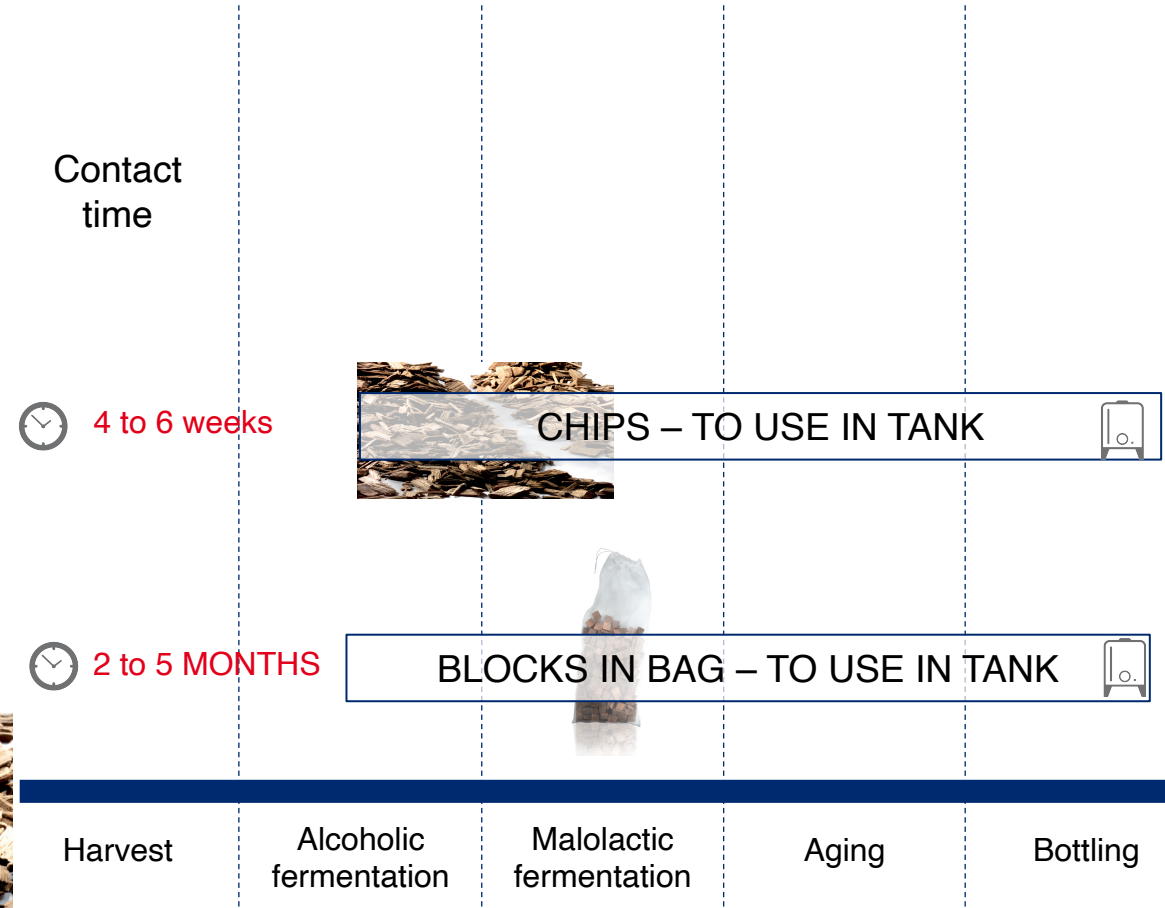
Premium American oak used in wine

DESIGNED TO BE USED IN TANK

- CHIPS
- BLOCKS



HOW TO CHOOSE THE RIGHT PRODUCT ?



Our oak provides high levels of vanilla, with some furfural, resulting in a smooth and creamy elevated mouthfeel.



CHIPS in wine

Feature high levels of vanillin and provide results in shorter periods of time giving rounded sweetness.

TECHNICAL ELEMENTS:

- Average unit weight: 9kg
- Packaging: Nylon infusion bag
Secondary packaging: polyester and white polyethene

CONTACT TIMES:

-4 To 6 weeks



Oenological profile / TOASTING



MEDIUM

- . Notes of fruit
- . Vanilla
- . Volume and creaminess



INTENSE

- . Black fruit
- . Spice & caramel
- . Round & creamy mouthfeel



FRENCH TOUCH

Red fruits notes and vanilla.
Structure and lengthy finish.



American Oak BLOCKS in wine



Increase and intensify oxygen levels coming from the oak's natural porosity

TECHNICAL ELEMENTS:

- Dimensions: 7.6cm X 3cm X 1cm
- Average unit weight: 9kg
- Packaging:
Infusion bag + heated, sealed PE-Alu bag

CONTACT TIMES:

2 to 5 months



Oenological profile / TOASTING



LIGHT

- . Red fruits and vanilla
- . Floral notes
- . Soft tannins



MEDIUM

- . Complex vanilla
- . Marshmallow aromas
- . Volume and creaminess



MEDIUM +

- . Spicy & cappuccino notes
- . Powerful & sound



Range of Products in
the Trial done by the
group R&D Dept.
(Cognac - France) in
Nov. 2021



❑ CHIPS

- FNO L, M, Intense
- FNO “French Touch”
- Acacia M
- FRENCH OAK M,

M+

(Selected by FNO)

❑ BLOCKS

- FNO M+
- French Oak 11mm

M+

(Selected by FNO)



FNO CHIPS L/M/
INTENSE
French Touch



ACACIA CHIPS M
Selected by FNO



FRENCH OAK M/M+
Selected by FNO



FNO BLOCKS M+



FRENCH OAK BLOCKS 11mm
M+
Selected by FNO





MACERATION TRIAL PROTOCOL



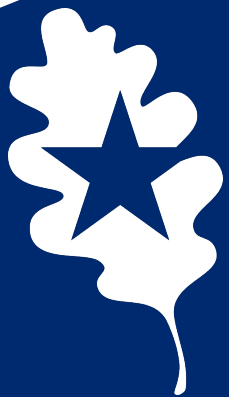
Spirit model solution

65% of ethanol solution (110 proof) with 10 g/L of wood

2 Maceration times:

- 2 weeks
- 4 weeks





ANALYTIC METHODS

GC-MS: trans and cis whisky-lactone

HPLC: phenolic acids, furans, aromatic aldehydes

DO 420nm spectra: color intensity
=> only for 4 weeks analysis



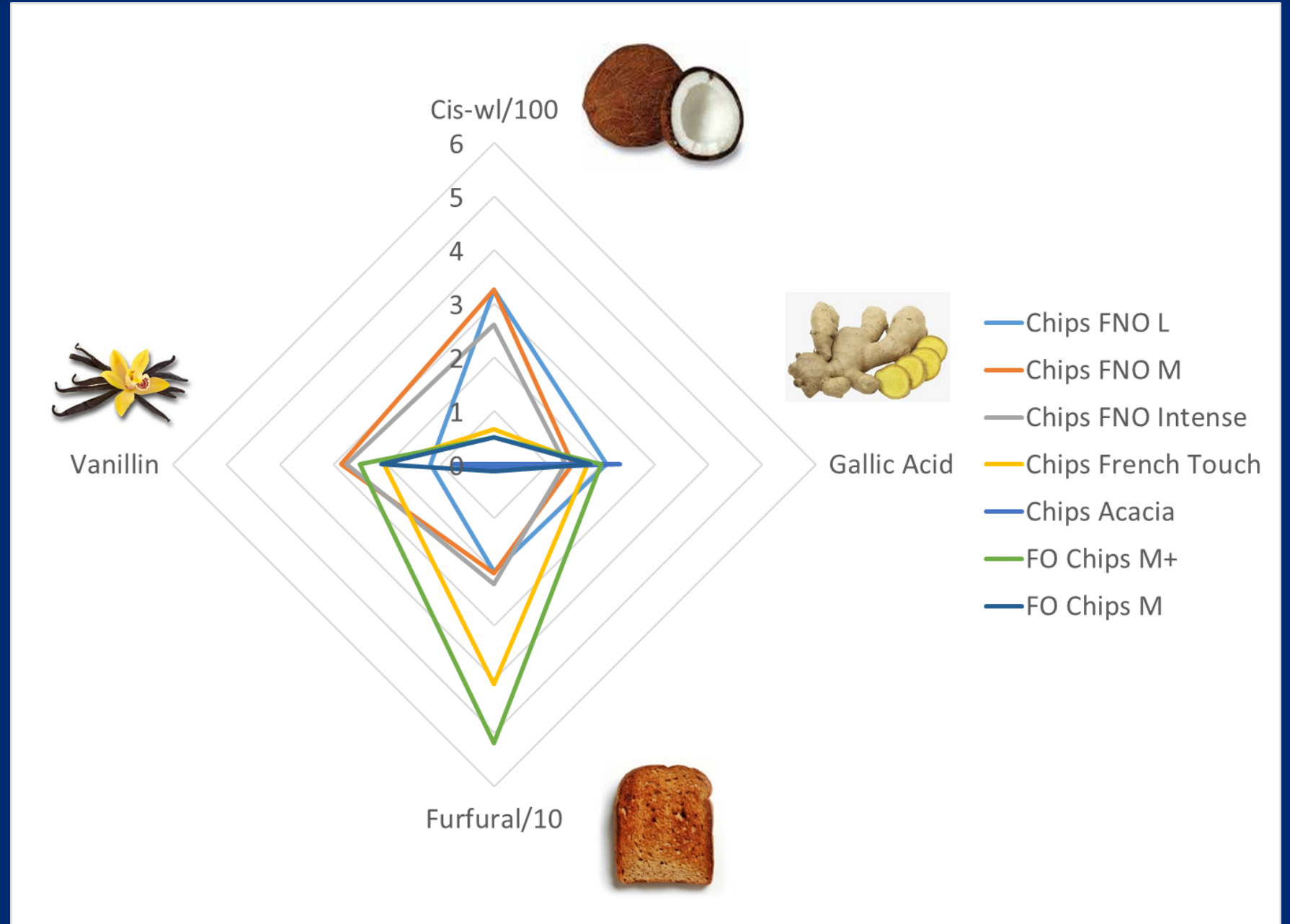
Spirits 2 weeks

	Wood	Chips FNO L	Chips FNO M	Chips FNO Intense	Chips French Touch	Chips acacia	FO Chips M	FO chips M+	Blocks M+ FNO	Blocks M+ FNO (grinded)	FO M+ Blocks 11mm
	Maceration time, days	15	15	15	15	15	15	15	15	15	15
µg/L	trans-whisky-lactone	65	65	65	0	0	0	0	0	0	0
µg/L	cis-whisky-lactone	325	325	260	65	0	0,5	0,5	0	260	0
mg/L	5HMF	1,69	1,73	1,51	3,54	3,12	2,12	1,96	0,98	1,58	2,05
mg/L	Gallic Acid	2,09	1,46	1,33	1,75	2,35	1,8	2	1,32	1,5	2,4
mg/L	Syringic Acid	2	5	4	3	1	1	2	4	3	1
mg/L	Vanillic Acid	0,66	1,74	1,59	1,13	0,21	1,45	2	1,82	1,42	1,06
mg/L	Coniferaldehyde	5,03	6,6	6,53	6,18	2,59	4,1	5	3,28	6,78	2,6
mg/L	Furfural	10	10,1	11,16	20,5	0,41	5,2	0,2	8,08	12,87	7,9
mg/L	5-Methyl-furfural	1,58	1,61	1,62	2,71	0	1,49	1,8	1,15	1,3	0,7
µg/L	Scopoetine	162	99	151	69	4	5	8	18	103	6
mg/L	Sinapaldehyde	16,68	22,9	24,63	25,83	3,4	21	24,8	10,13	17,85	9,4
mg/L	Syringaldehyde	3,03	7,79	7,2	5,09	0,9	5,6	7,2	7,61	6,09	5
mg/L	Vanillin	1,19	2,86	2,76	2,05	0,76	2,1	2,5	3,44	2,73	2,6

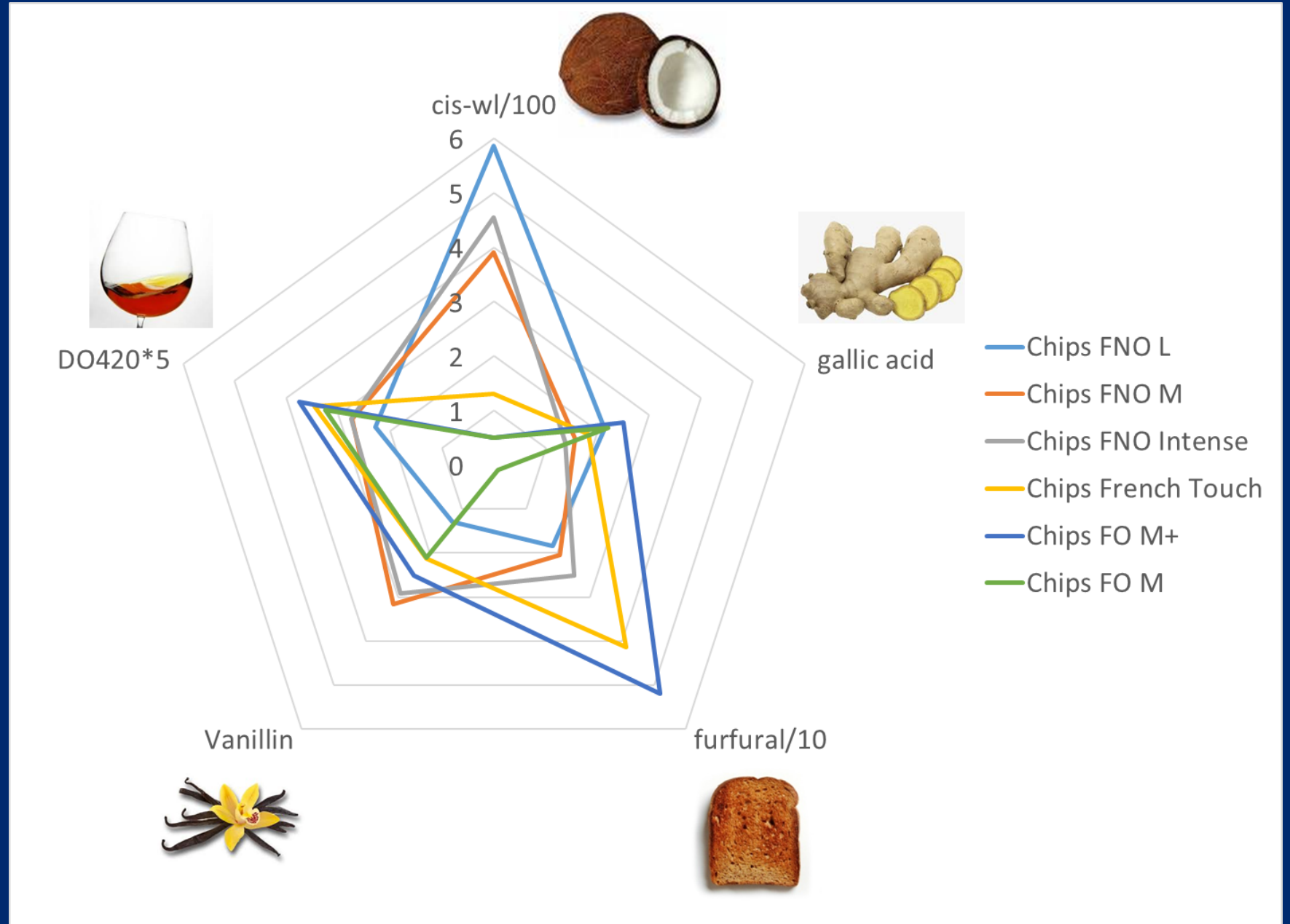
Spirits 4 weeks

	Wood	Chips FNO L	Chips FNO M	Chips FNO Intense	Chips French Touch	Chips acacia	FO Chips M	FO chips M+	Blocks M+ FNO	Blocks M+ FNO (grinded)	FO M+ Blocks 11mm	Chips FNO L
	Maceration time, days	30	30	30	30	30	30	30	30	30	30	30
µg/L	trans-whisky-lactone	130	130	130	65	0	50	50	65	130	5	20
µg/L	cis-whisky-lactone	585	390	455	130	0	121	98	65	390	10	45
mg/L	5HMF	2,2	2,21	2,09	4,9	3,54	1,9	2,2	1,76	2,21	1,5	2
mg/L	Gallic Acid	2,14	1,56	1,38	1,83	2,75	2,2	2,5	1,3	1,7	1,2	3,2
mg/L	Syringic Acid	3	5	4	4	1	1	2	4	4	3	4
mg/L	Vanillic Acid	0,67	1,91	1,66	1,18	1,08	1,9	1,45	1,62	1,57	1,3	2,5
mg/L	Coniferaldehyde	5,23	7,35	6,91	6,55	2,73	0,9	1,2	3,48	7,67	3	6
mg/L	Furfural	10,21	10,25	11,51	20,68	0,27	0,6	26	7,95	15,53	9	21
mg/L	5-Methyl-furfural	1,67	1,66	1,68	2,75	0,23	1,7	3	1,5	1,3	1,9	3,2
µg/L	Scopoletine	166	109	159	73	3	3	2,56	18	111	5	45
mg/L	Sinapaldehyde	17,54	27,28	26,81	28,33	2,86	23	20,8	10,78	20,61	8	19
mg/L	Syringaldehyde	3,92	9,46	8,3	6,2	1,03	5	5,32	7,17	6,88	5,6	7
mg/L	Vanillin	1,3	3,15	2,92	2,12	1,07	2,1	2,5	2,96	3,12	2,2	2,6
	DO 420	0,456	0,546	0,549	0,694	0,854	0,65	0,75	0,25	0,39	0,4	0,79

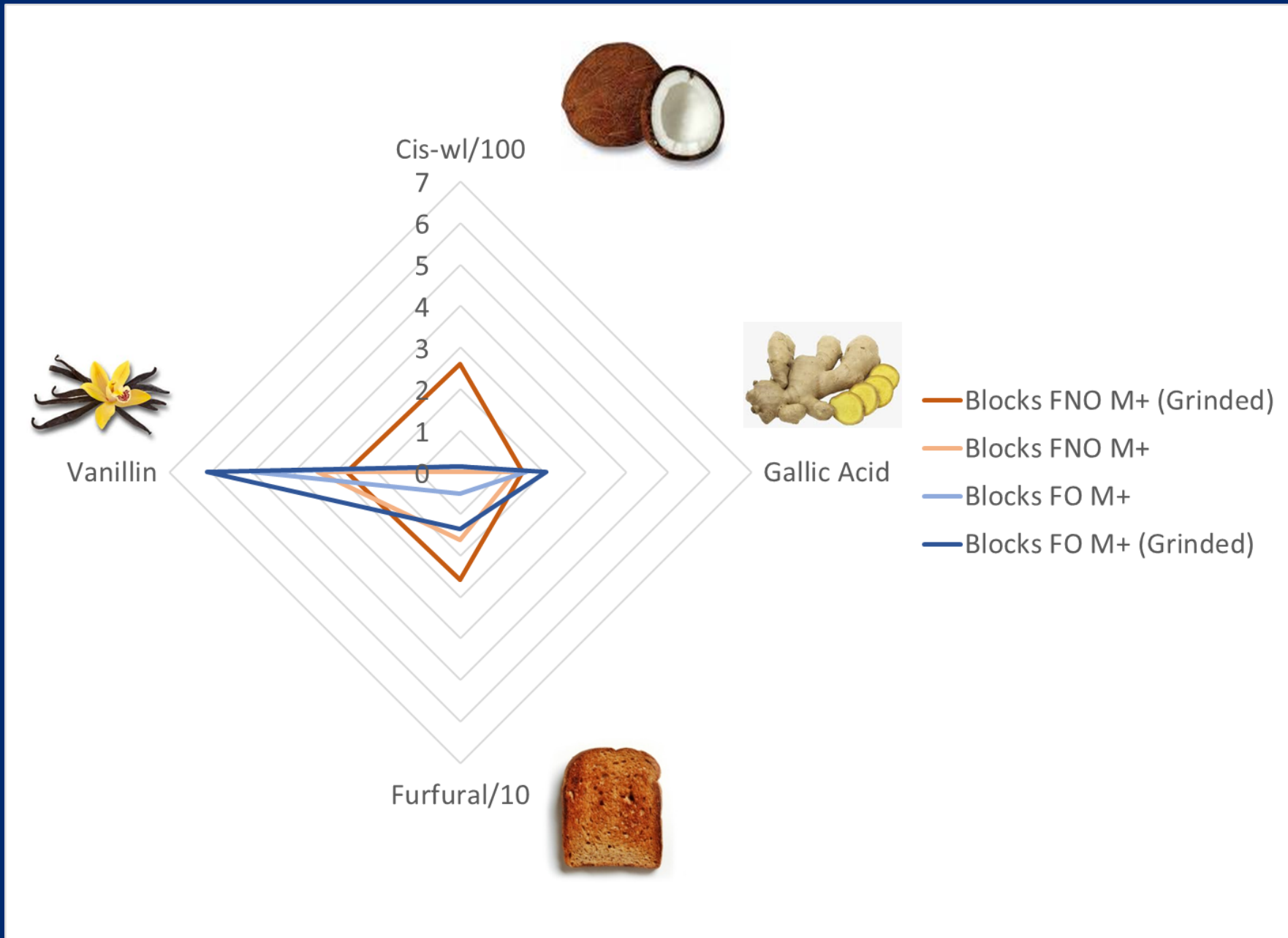
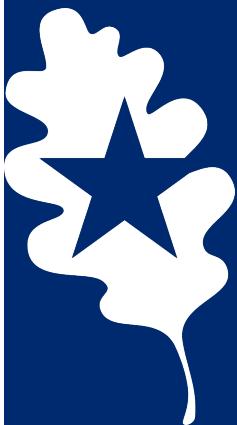
CHIPS : 2 weeks



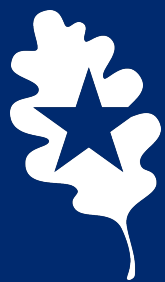
CHIPS : 4 weeks



BLOCKS : 2 weeks



BLOCKS : 4 weeks



DO420*5



cis-wl/100

4.5
4
3.5
3
2.5
2
1.5
1
0.5
0



gallic acid

Vanillin



furfural/10



- FNO Blocks M+ (projection)
- FNO Blocks M+
- Blocks FO M+
- Blocks FO M+ (projection)



SENSORIAL IMPACTS ON SPIRITS



FNO CHIPS



Acacia and French Oak Chips
Selected by FNO

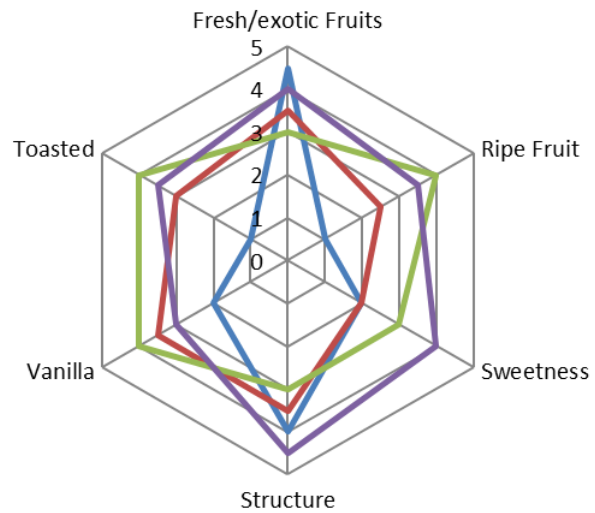


FNO BLOCKS



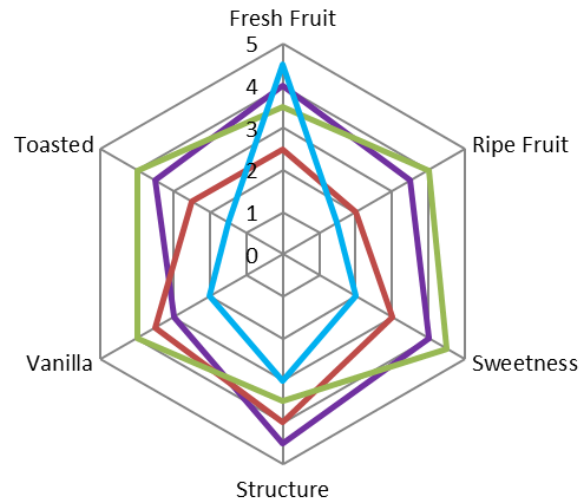
French Oak BLOCKS
Selected by FNO

Sensorial Impact of FNO Chips



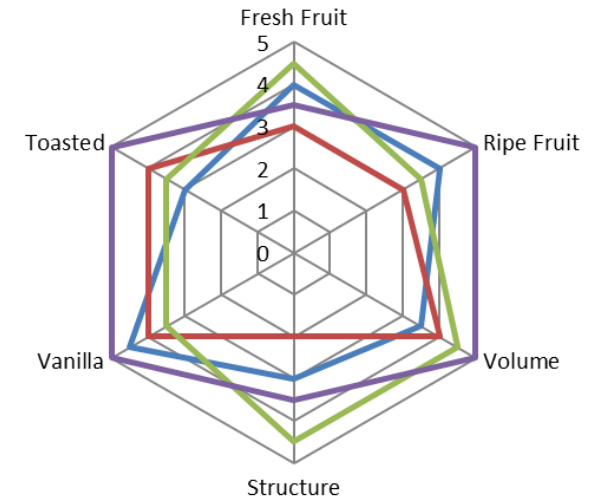
Light Medium Intense French Touch

Sensorial Impact of French Oak Chips



French Touch FOM FOM+ Acacia M

Sensorial Impact of Blocks



FNO Blocks M FNO Blocks M+ FO Blocks M FO Blocks M+



IMPLEMENTATION FOR SPIRITS



Dosage: 5 g/L for subtle impact to
12g/L for stronger oak influence.

Contact time : 2 months

Other recommendation : Add
Oxygen to develop a more mature
profile (pump over, straight
addition)



Dosage: 8 to 15g/L

Contact time : 6 months

Blocks are closer to the barrel
kinetics

Other recommendation:
Regular stirring for better extraction.





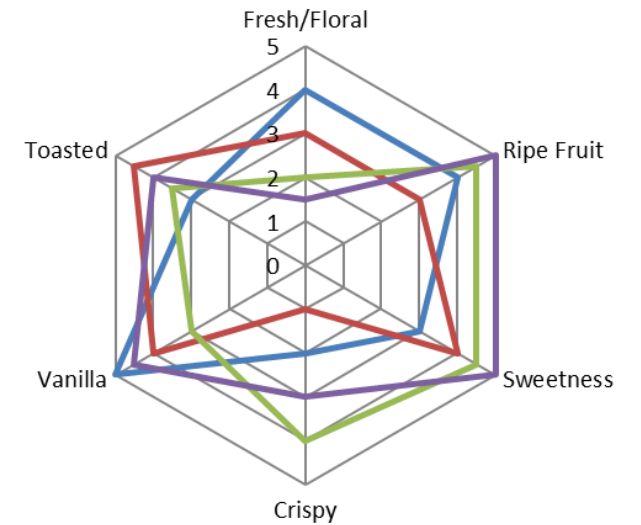
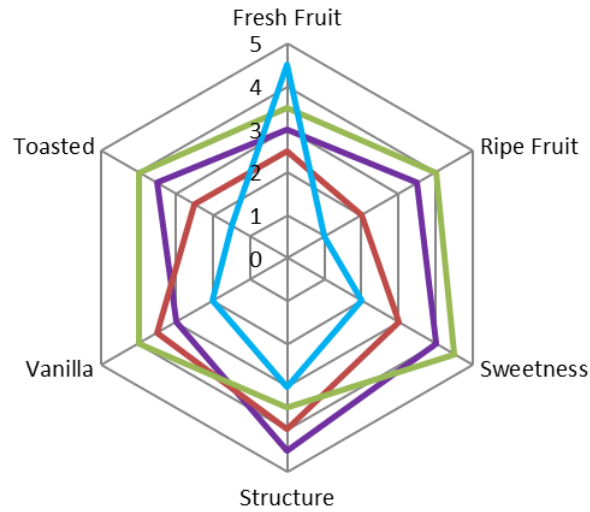
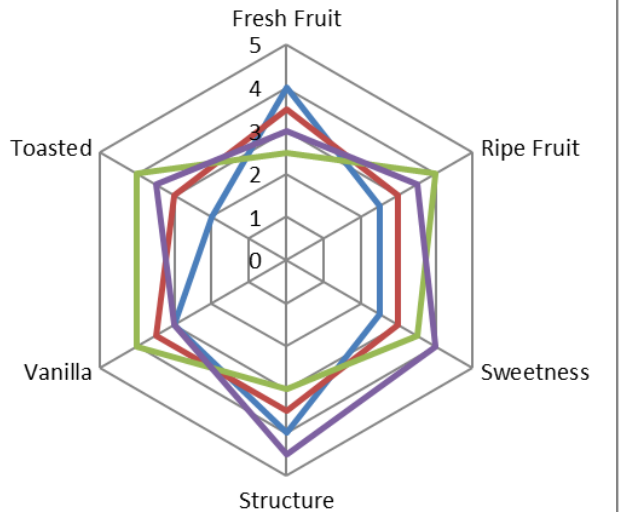
SENSORIAL IMPACTS ON BEERS



Sensorial Impact of FNO Chips

Sensorial Impact of French Oak Chips

Sensorial Impact of Blocks





IMPLEMENTATION FOR BEERS



FNO CHIPS



Acacia and
French Oak
Chips
*Selected by
FNO*



FNO BLOCKS



French Oak
BLOCKS
*Selected by
FNO*



Dosage: 1g/L (fruity, fresh) to
8g/L (dark, sweet, coffee, vanilla)

Contact time : 1 to 4 months

Toasting flavors come out faster
than with Blocks



Dosage: 5 to 10g/L

Contact time : 6 months

Other recommendation : Stirring
beer helps to extract volatile
compounds and oak integration





Tools:

- Samples
- Bag-in-box
- PDF technical sheets

www.finenorthernoak.com



THANK YOU

