

**Amerikansk
Whiskey**
2.0
**Smagning
hos**
**Kolding
Whiskylaug**



HENRIK BRANDT

2025 – 04 – 25



Kort introduktion af mig selv ...

- Bourbon nørde
- Har en online Bourbon skole på www.thebourbonnerd.com
- Skriver whisk(e)y anmeldelser på www.straightwhiskey.dk
- Administrator af "Nordic Bourbon Community" FB gruppen
- Udgav den første danske bog om amerikansk whiskey i 2019
- Skriver (lange) artikler i Din Whisky Guide
- Arbejder til daglig i den danske virksomhed "3Shape"
- Har besøgt USA 92 gange og har været i alle 50 stater
- Elsker at grille og har haft hund i hele mit liv
- Er gift, har en datter og blev bedstefar sidste år!



Agenda

Og ikke mindst:
Smagning af
8 produkter fra USA

- Sådan laver man whisky - lynudgaven
- Pot Still mod Column Still
- Koldfiltrering – hvad er det
- Hvilke kornsorter må man bruge i USA?
- Maltning i USA mod Skotland
- Hvad er "Whiskey Specialty" kategorien?
- "Seasoning", "Toasting" og "Charring"
- Gærcellernes påvirkning af smagen
- "Angle's Share" & "Devil's Cut"
- Gennemgang af udvalgte specialudtryk

Et par ord om **produktion** i USA

The Basic Process of Whiskey Making



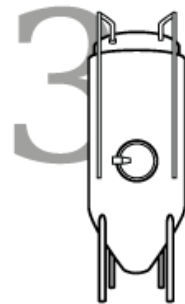
1 Preparation

Various grains are ground and cooked. Barley is malted, a process of soaking the barley and spreading it for about three weeks, allowing it to sprout, and drying and heating it.



2 Mashing

The cooked grain and malted barley are added to warm water, which converts into a liquid known as mash.



3 Fermenting

The mash is added to a fermentation tank, along with yeast. The yeast converts the sugar to alcohol. After three or four days, the resulting liquid is about 10% alcoholic and is known as distiller's beer, or wash.



4 Distilling

The wash is heated to the point where the alcohol turns to vapor, but the water remains liquid. The alcohol is then collected in a second container. This process is repeated to produce "high wine" or "new whiskey."



5 Aging

Water is added to the high wine, which is aged in wooden barrels, usually made from charred white oak. Here the whiskey ages at least three or four years, and some are aged up to ten or fifteen years.



6 Bottling

The resulting whiskey is stored in glass bottles, which do not react with the whiskey's flavor.

De 8 produkter vi skal smage i dag

1



**Corn
Whiskey**

2



**Straight
Bourbon**

3



**Straight Rye
Whiskey**

4



**American
Single Malt**

De 8 produkter vi skal smage i dag

5



**Whisky
Specialty**

6



**Cask Strength
Wheated Bourbon**

7



**Cask Strength
Bourbon**

8



**Cask Strength
Rye**

Driftless Glen tilbud (egen import)



Small Batch Rye
48% ABV
4 flasker

PRIS: ~~449~~ 349,-



Cask Strength Bourbon
58-61,5% ABV
18 flasker

PRIS: ~~649~~ 499,-



Cask Strength Rye
60% ABV
5 flasker

PRIS: ~~649~~ 499,-

Smagning **1** af 8

Navn:	White Corn Whiskey
Producent:	George Dickel (Diageo)
Stat:	Tennessee
Type:	Corn Whiskey
Mash bill:	84% majs, 8% rug & 5% maltet byg
ABV:	45,5%
Alder:	Ikke lagret
Prisniveau:	399 DKK

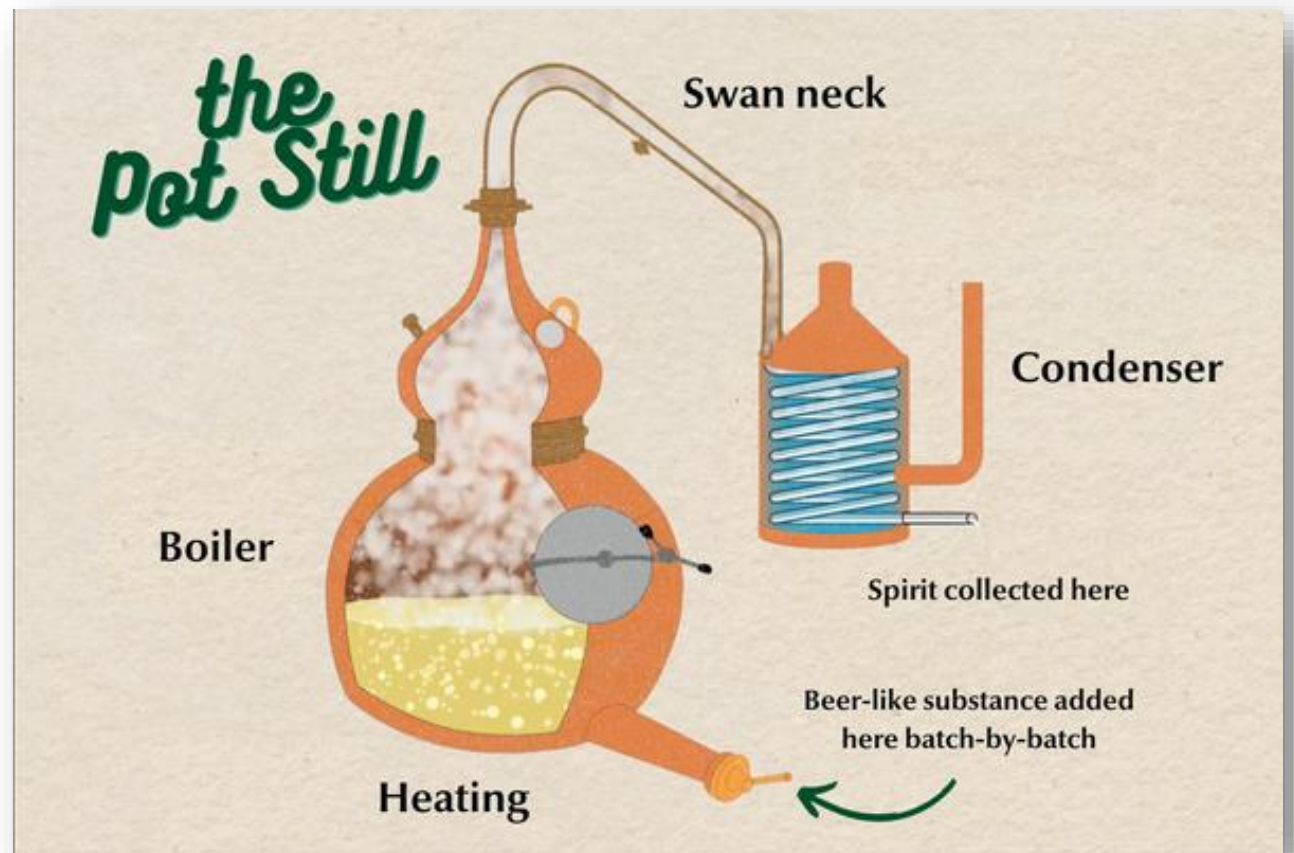


Pot Still vs. Column Still



Pot Still

- Opfundet i Egypten for ca. 4000 år siden
- Blev oprindeligt brugt til parfume og æteriske olier
- Mindre effektiv end Column Still – og kræver mere arbejde
- Giver en mere "rig" new make med flere kongenere
- Typisk lavere ABV end Column Still
- Det mest normale setup i, f.eks., Skotland og Irland
- Giver mulighed for "Maillard reaktion"



Pot Still - eksempler



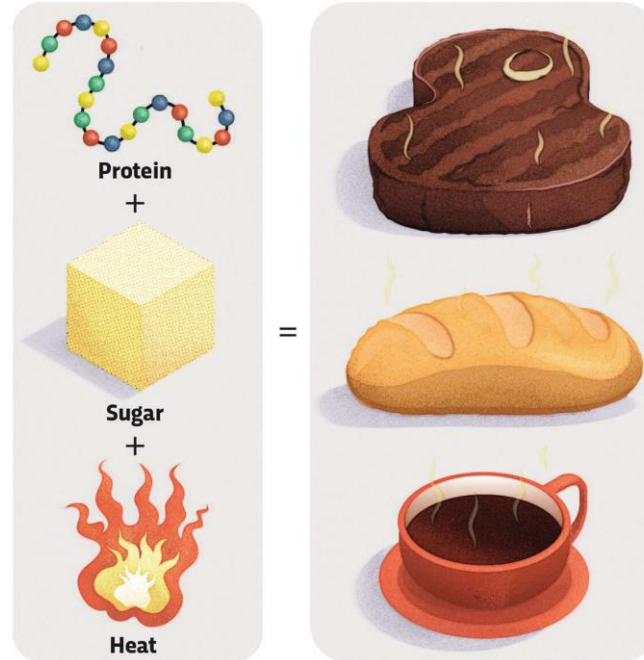
Teeling Distillery



Glendalough Distillery

“Maillard reaktionen”

- Er nemt at opnå, hvis Pot Still'en er direkte opvarmet med ild
- Ret svær, hvis opvarmningen sker med damp
- Næsten umuligt i en Column Still



Louis Camille Maillard

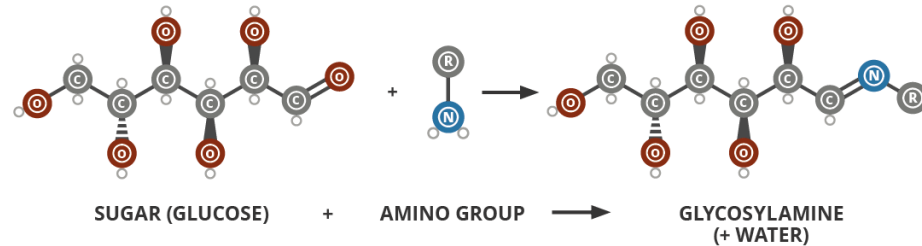


“Maillard reaktionen” (hvis du har svært ved at sove om natten)

The Maillard reaction occurs during cooking, and it is responsible for the non-enzymatic browning of foods when cooked. It actually consists of a number of reactions, and can occur at room temperature, but is optimal between 140-165°C. The Maillard reaction occurs in three stages, detailed here.

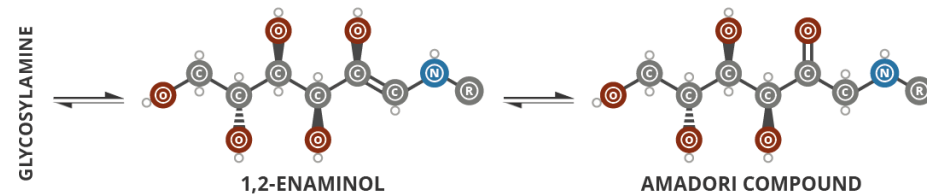
1

The carbonyl group on a sugar reacts with a protein or amino acid's amino group, producing an N-substituted glycosylamine.



2

The glycosylamine compound generated in the first step isomerises, by undergoing Amadori rearrangement, to give a ketosamine.



3

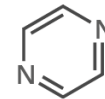
The ketosamine can react in a number of ways to produce a range of different products, which themselves can react further.



Classes of Maillard Reaction Products



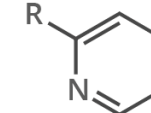
The Maillard reaction produces hundreds of products; a small subset of these contribute to flavour and aroma, some groups of which are described below. Melanoidins are also formed, brown, polymeric substances which contribute to the colouration of many cooked foods.



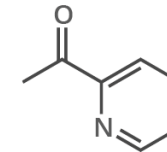
PYRAZINES
cooked
roasted
toasted



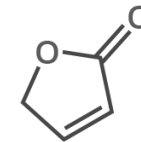
PYRROLES
cereal-like
nutty



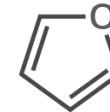
ALKYLPYRIDINES
bitter
burnt
astringent



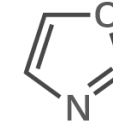
ACYLPYRIDINES
cracker-like
cereal



FURANONES
sweet
caramel
burnt



FURANS
meaty
burnt
caramel-like



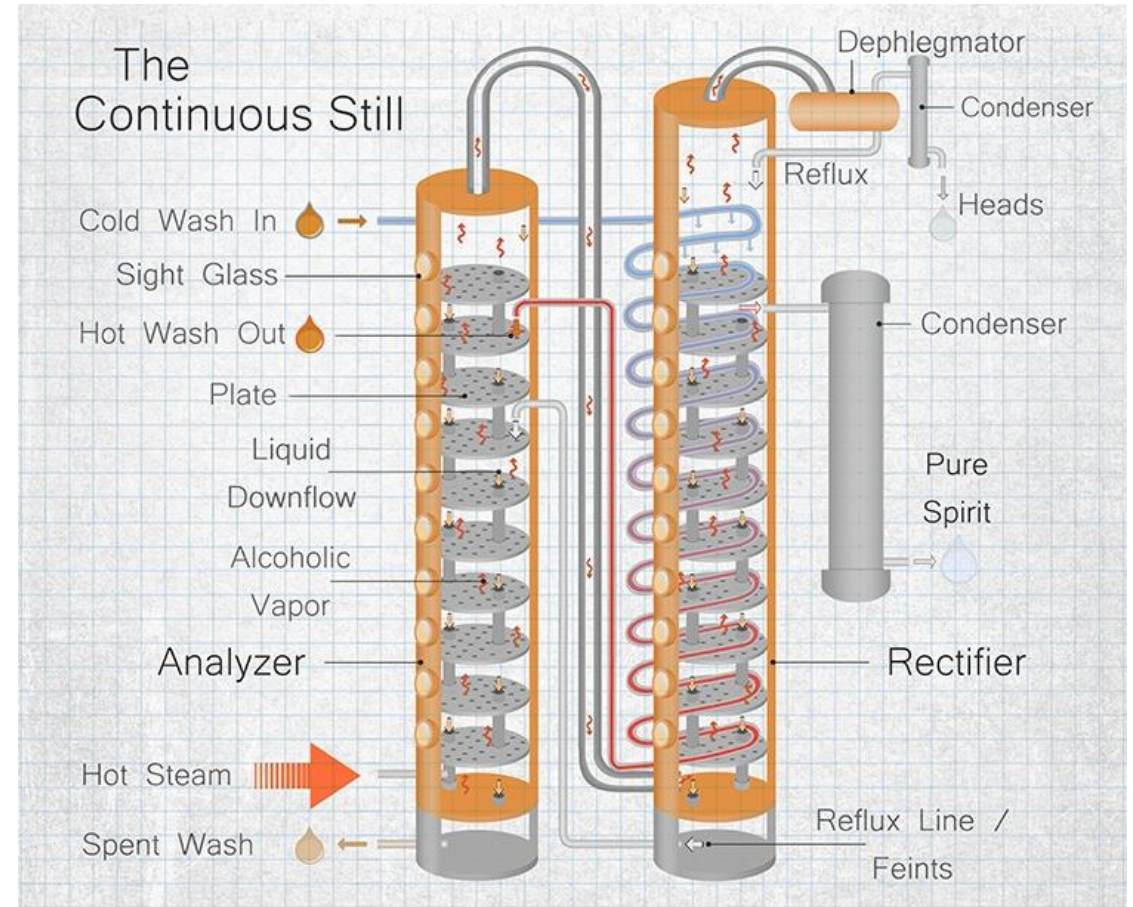
OXAZOLES
green
nutty
sweet



THIOFENES
meaty
roasted

Column Still

- "Kolonne" Still på dansk – kendes også som en "Continuous Still"
- Enkelt-kolonne udgaven blev opfundet i 1828 af Robert Stein
- To-kolonne udgaven blev opfundet i 1830 af Aeneas Coffey
- Giver mulighed for 24/7 produktion
- Producerer op til 95% ABV alkohol (Pot Still er oftest omkring 60-80%)
- Færre kongenere – og dermed lidt mere neutral smag
- Bliver også brugt til vodka og gin



Kongenere og estere

Og de har mærkelige navne.....

- **Kongeners:** Bred kategori af stoffer der bliver produceret i løbet af fermenteringen og lagringen. Giver **komplekse** smagsnoter.
- **Estere:** En underafdeling af kongener, der bliver produceret under fermenteringen. Giver **frugtige** smagsnoter

Ethyl Ethanoate: This ester is continuously formed during aging and contributes fruity notes reminiscent of green apples. Its concentration increases over time, enhancing the whiskey's aroma.

Isopentyl Ethanoate: Known for its banana-like aroma, it adds a sweet, fruity character to the whiskey.

Ethyl Hexanoate: This ester imparts fruity notes similar to apple and anise, adding to the complexity.

Ethyl Butyrate: Contributes pineapple and tropical fruit aromas, enriching the flavor profile.

Ethyl Acetate: This ester is one of the most common and contributes a fruity aroma reminiscent of green apples.

Isoamyl Acetate: Known for its banana-like aroma, this ester adds a sweet, fruity character to whiskey.

Ethyl Butyrate: Provides pineapple and tropical fruit aromas, enriching the whiskey's flavor profile.

Phenethyl Acetate: Contributes floral notes, such as rose and honey.

Estere – og deres duftprofil

	methyl 1 carbon	ethyl 2 carbons	propyl 3 carbons	2-methyl propyl-	butyl 4 carbons	pentyl 5 carbons	hexyl 6 carbons	benzyl benzene ring	heptyl 7 carbons	octyl 8 carbons	nonyl 9 carbons
methanoate 1 carbon	ETHEREAL			ETHEREAL							?
ethanoate 2 carbons											
propanoate 3 carbons											?
2-methyl propanoate 4 carbons, branched		ETHEREAL									?
butanoate 4 carbons											?
pentanoate 5 carbons					ETHEREAL					?	?
hexanoate 6 carbons											
benzanoate benzene ring										?	

Kongenere – og dagen efter ...



DARK DRINKS

HIGH LEVELS OF CONGENERS

Combining these types of alcohol with mixers may make the effects of the congeners more pronounced.

- cognac
- brandy
- red wine
- whiskey (Scotch, bourbon, blends)
- tequila
- dark beer



LIGHT & CLEAR DRINKS

LOW LEVELS OF CONGENERS

In theory, those who drink these alcohols should feel less effects than they would after partaking in darker drinks.

- vodka
- white wine
- gin
- light rum
- sake
- light beers

Smagning **2** af 8

Navn:	Old Grand-Dad BONDED
Producent:	Jim Beam (Suntory)
Stat:	Kentucky
Type:	Straight Bourbon Whiskey
Mash bill:	63% majs, 27% rug & 10% maltet byg
ABV:	50%
Alder:	NAS (dog mindst 4 år)
Prisniveau:	499 DKK (1 liter)



Koldfiltrering – hvad er det?



Koldfiltrering foretages for at undgå flokkulering

- "Flokkulering" sker når fedtsyrer klumper sig sammen
- Det sker typisk når whiskyen bliver kold
- Nedkøling kan sagtens ske under transport
- Kan ikke umiddelbart fjernes, nå skaden er sket
- Har ingen indflydelse på smagen!



Sker **IKKE**, når ABV er over 46% !

Koldfiltrering forcerer – og fjerner – flokkulering

- Whiskyen nedkøles til mellem 4 og 12 grader, så flokkuleringen sker
- Køres herefter igennem et filter
- Nu er fedtsyrerne fjernet – og flokkuleringen sker ikke igen



Koldfiltreringen fjerner smag!

Smagning **3** af 8

Navn:	Templeton 10-year Rye
Producent:	Templeton (Infinum Spirits)
Stat:	Iowa (Indiana)
Type:	Straight Rye Whiskey
Mash bill:	95% rug 5% maltet byg
ABV:	52%
Alder:	10 år
Prisniveau:	599 DKK (men p.t. udsolgt)



Templeton, Templeton, Templeton



Templeton, Templeton, Templeton



Hvilke kornsorter må man bruge I USA?

Korn

- Majs
- Rug
- Hvede
- Byg
- Havre
- Spelt
- Ris
- Triticale
- Hirse

Pseudo-korn

- Amarant
- Boghvede
- Quinoa
- Chia

99% af al whiskey
(også i resten af
verden)

Bælgfrugter

- Kikærter
- Almindelige bønner
- Ærter
- Hestebønner
- Linser
- Mungbønner
- Jordnødder
- Sojabønner

Smagning 4 af 8

Navn:	Boulder American Single Malt – Single Barrel (whisky.dk)
Producent:	Boulder Spirits
Stat:	Colorado
Type:	American Single Malt
Mash bill:	100% maltet byg
ABV:	50.5%
Alder:	6 år
Prisniveau:	599 DKK



Gærcellerne skal bruge sukker for at starte fermenteringen

- Byg (og andre kornsorter) indeholder masser af stivelse
- Spirerne indeholder "amylase", der kan konvertere stivelse til sukker
- Gærcellerne har brug for sukker – og kan ikke bruge stivelse



Maltning er spiring + tørring



Tørring, når man **ikke** skal lave røget whisky



Tørring, når man skal lave røget whisky



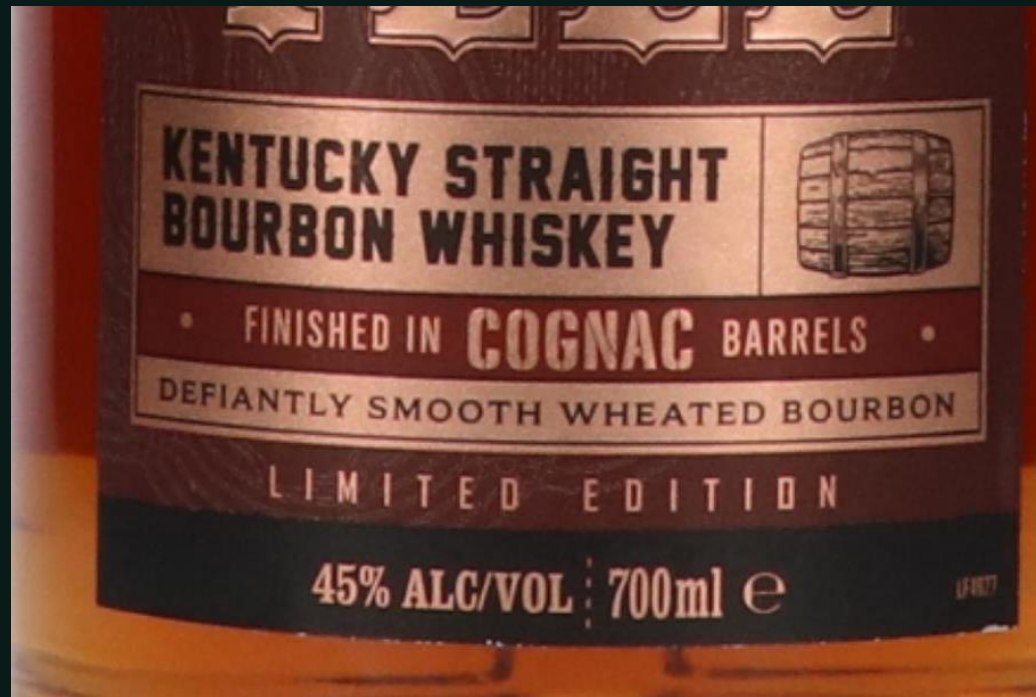
Smagning **5** af 8

Navn:	Rebel Yell Bourbon – finished in Cognac Barrels
Producent:	Lux Row Distillers (MGP)
Stat:	Kentucky
Type:	Whisky Specialty
Mash bill:	68% majs, 20% hvede & 12% maltet byg
ABV:	45%
Alder:	NAS (så mindst 4 år) + 6 måneder i Cognac fade
Prisniveau:	599 DKK



Hvad er "Whiskey Specialty" kategorien?

- En special-kategori for efterlagrede whiskey-produkter

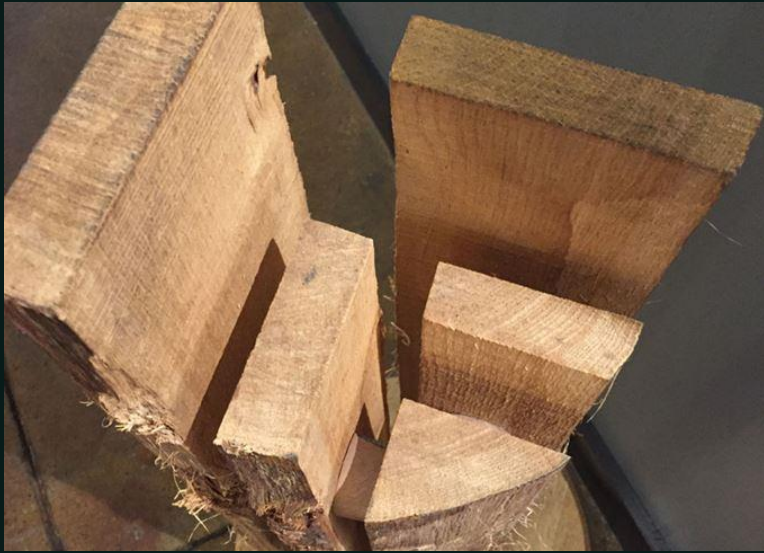


Smagning 6 af 8

Navn:	Maker's Mark – Cask Strength
Producent:	Maker's Mark (Suntory)
Stat:	Kentucky
Type:	Straight Bourbon
Mash bill:	70% majs, 16% hvede & 14% maltet byg
ABV:	54,35%
Alder:	NAS (så mindst 4 år)
Prisniveau:	699 DKK



"Seasoning", "Toasting" og "Charring"



50% vand



~12.5% vand

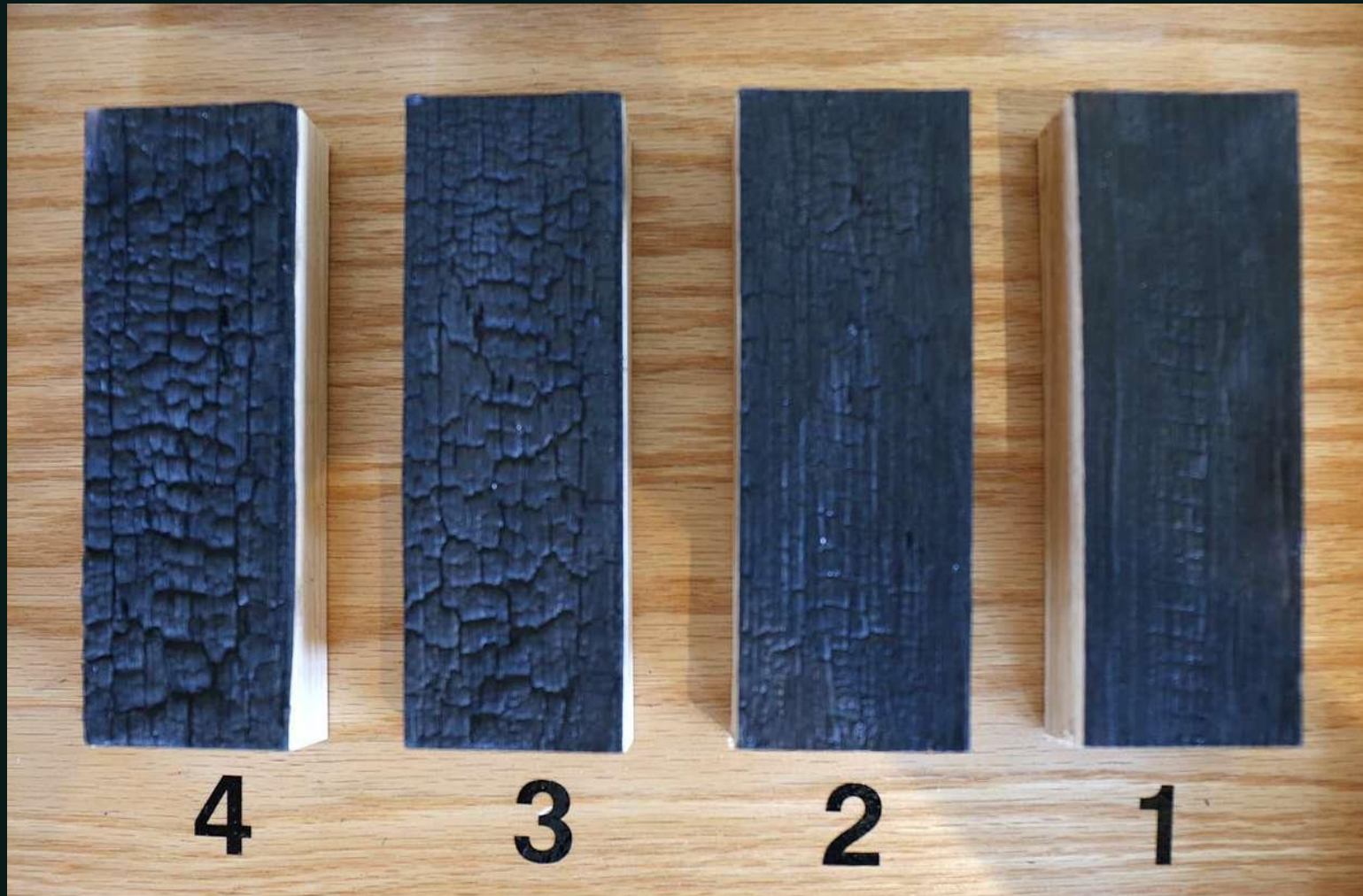
"Seasoning", "Toasting" og "Charring"



"Seasoning", "Toasting" og "Charring"



"Seasoning", "Toasting" og "Charring"



"Seasoning", "Toasting" og "Charring"



Smagning 7 af 8

Navn:	Driftless Glen Straight Bourbon – Cask Strength
Producent:	Driftless Glen Distillery
Stat:	Wisconsin
Type:	Straight Bourbon
Mash bill:	60% majs, 20% rug & 20% maltet byg
ABV:	61,5%
Alder:	5 år (denne er dog 6 år)
Prisniveau:	649 DKK



Gærcellernes indflydelser på smag og duft

	methyl 1 carbon	ethyl 2 carbons	propyl 3 carbons	2-methyl propyl-	butyl 4 carbons	pentyl 5 carbons	hexyl 6 carbons	benzyl benzene ring	heptyl 7 carbons	octyl 8 carbons	nonyl 9 carbons
methanoate 1 carbon	ETHEREAL			ETHEREAL							?
ethanoate 2 carbons											
propanoate 3 carbons											?
2-methyl propanoate 4 carbons, branched		ETHEREAL									?
butanoate 4 carbons											?
pentanoate 5 carbons					ETHEREAL					?	?
hexanoate 6 carbons											
benzanoate benzene ring										?	

Smagning 8 af 8

Navn:	Balcones Eclipse Rye – Cask Strength
Producent:	Balcones Distillery
Stat:	Texas
Type:	Straight Rye Whiskey
Mash bill:	100% rug
ABV:	64%
Alder:	NAS (så mindst 4 år)
Prisniveau:	749 DKK



"Angle's Share" & "Devil's Cut"

- "Angel's Share" er den naturlige fordampning fra tønderne
- Ca. 10% første år
- Ca. 4% i efterfølgende år
- I Skotland: Ca. 1% pr. år!

ÅR	LITER TILBAGE
0	200
1	180
4	160
12	115
18	90



”Angle’s Share” & ”Devil’s Cut”

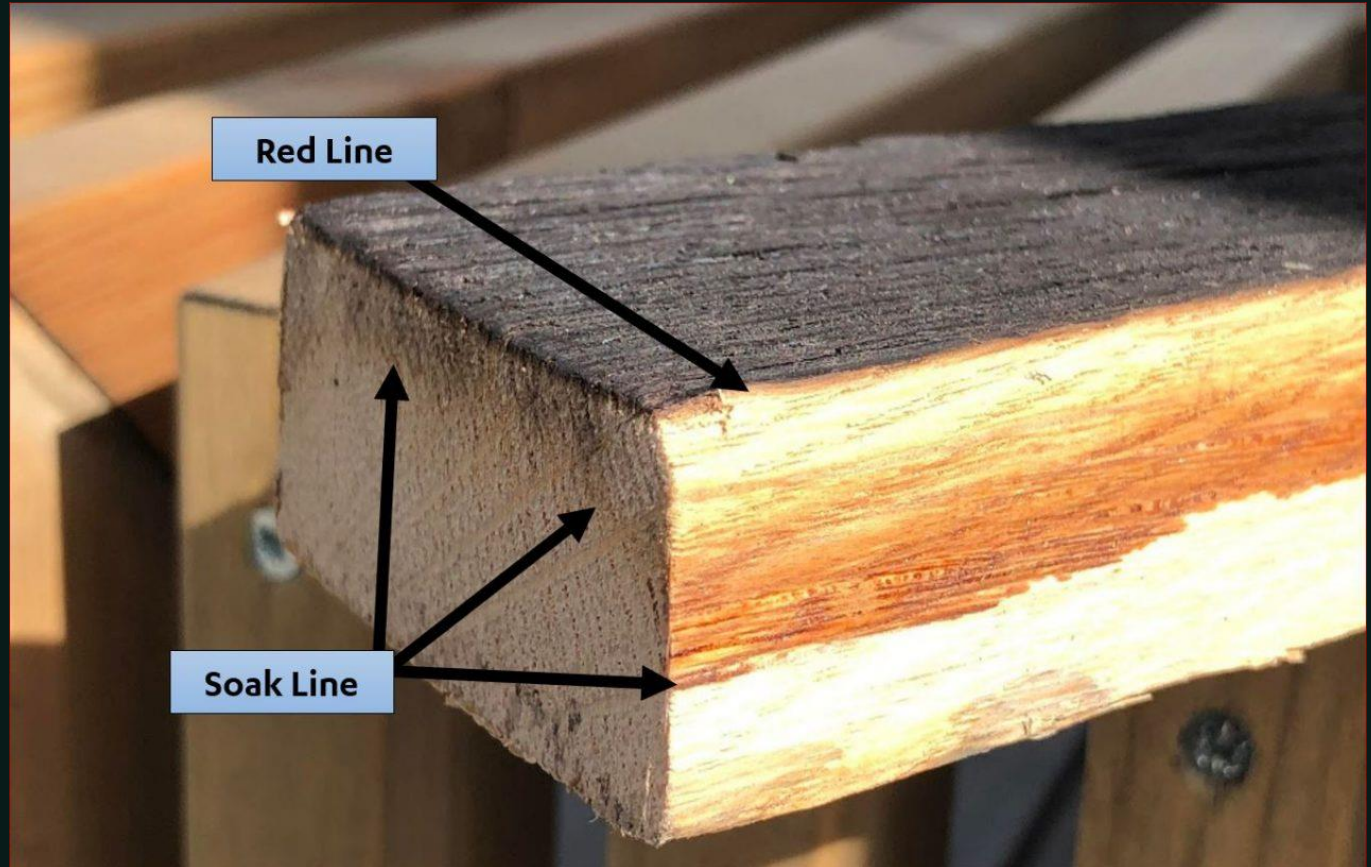
- ”Angel’s Share” er den naturlige fordampning fra tønderne
- Ca. 10% første år
- Ca. 4% i efterfølgende år
- I Skotland: Ca. 1% pr. år!



Buffalo Trace Distillery (Kentucky)
Væskenniveau (og farve) efter 1,4, 9 og 18 år

”Angle’s Share” & ”Devil’s Cut”

- ”Angel’s Share” er den naturlige fordampning fra tønderne
- Ca. 10% første år
- Ca. 4% i efterfølgende år
- I Skotland: Ca. 1% pr. år!



”Angle’s Share” & ”Devil’s Cut”

- ”Devil’s Cut” er betegnelsen for den whiskey der er tilbage i tønden, efter den er blevet tømt
- Der kan nemt være 7-8 liter tilbage efter tømning!
- Hovedårsagen til at de brugte tønder bruges igen!



Udvalgte special-udtryk

Straight

Proof/ABV

Bottled-in-Bond

Small Batch

Dusty

Grain-to-Glass

Kentucky Hug

Charcoal
Filtering

Single Barrel

Sour & Sweet
Mash

White Dog

Mash Bill

**Er der stemning for
en sidste dram?**

Driftless Glen tilbud (egen import)



Small Batch Rye
48% ABV
4 flasker

PRIS: ~~449~~ **349,-**



Cask Strength Bourbon
58-61,5% ABV
18 flasker

PRIS: ~~649~~ **499,-**



MobilePay:
3673YG



Cask Strength Rye
60% ABV
5 flasker

PRIS: ~~649~~ **499,-**

Tak for denne gang!