THE THELEN RESERVE

BOURBON

FROM GRAIN TO GLASS

American whiskey. Defined by craft. Shaped by grain, yeast, oak, and time.



WHAT MAKES IT BOURBON? [1]

51% minimum corn



49% remaining grain

- Made and aged in the United States.
- At least 51% corn in the grain recipe.
- Distilled to no more than 160 proof (80% ABV).
- Enters new, charred oak barrels at no more than 125 proof (62.5% ABV).
- Bottled at 80 proof (40% ABV) or higher.
- No added coloring or flavoring.

Bourbon: no minimum aging period.
Straight bourbon: at least 2 years.

Kentucky is iconic, but bourbon can be made across the U.S. Oak is required; American white oak is common, not legally mandatory.

THE JOURNEY [2,3]



GRAIN
The mash bill sets the starting character.

MASHING
Heat, water, and enzymes turn starch into fermentable sugars.

FERMENTATION
Yeast creates alcohol and aroma compounds.

DISTILLATION
Concentrates alcohol and selects the spirit's flavor character.

MATURATION
New charred oak adds color and compounds while reactions reshape flavor.

BOTTLING
Barrels are selected; water may adjust proof.

WHY TWO BOURBONS TASTE DIFFERENT [2,3]



GRAIN
Corn, rye, wheat, and malted barley change the recipe.

YEAST
Strain and fermentation conditions influence fruity and floral aromas.

STILL
Design, copper contact, and spirit selection shape the distillate.

OAK + TIME
Wood, heat treatment, entry proof, and warehouse conditions influence maturation.

Flavor comes from the whole process.

INSIDE THE BARREL [3]



EXTRACTION
Alcohol and water dissolve wood-derived compounds.

REACTION
Oxidation and ester chemistry reshape aromas over time.

ADSORPTION
Char can bind some compounds; it is only one part of maturation.

EVAPORATION
Water and alcohol escape. Losses and proof changes depend on conditions.

More age or deeper char does not guarantee better bourbon.

THE CHEMISTRY YOU CAN SMELL [2,3]

Compound	Association
Vanillin	Vanilla
Oak lactones	Coconut, woody
Eugenol	Clove, spice
Esters	Fruity aromas
Furans	Toasted, caramel-like

Associations, not a recipe: concentration and compound interactions change perception.

READ THE LABEL [1]

STRAIGHT
At least two years in new charred oak.

SINGLE BARREL
Bottled from one barrel; each barrel can differ.

SMALL BATCH
A producer-selected batch, with no universal barrel count.

PROOF
U.S. proof equals twice the ABV.
100 proof = 50% ABV.

TASTE WITH INTENTION

NOSE
Smell gently. Notice vanilla, fruit, spice, and oak.

PALATE
Take a small sip. Explore sweetness, texture, and balance.

FINISH
Notice what lingers and how it changes.

FINAL TAKE
Judge balance and enjoyment, not age or proof alone.

A few drops of water can change the aromas you perceive.
Compare, take notes, and find your preference.

SELECTED REFERENCES

[1] U.S. federal standards: 27 CFR §5.143.
[2] Kelly et al., *Sources of Volatile Aromatic Congeners in Whiskey, Beverages* (2023), 9:64.
[3] Gollihue, Pook & DeBolt, *Sources of variation in bourbon whiskey barrels: a review, Journal* of the Institute of Brewing (2021). doi:10.1002/jib.660.

THE THELEN RESERVE

Understand the craft. Explore the flavor.