

Barrel to Chip Surface Area Calculation Whisky

A 53 gallon barrel has 3693 in² of surface area

This means there are 70 in²/gallon

Assume 1/4 inch penetration on all sides

We therefor require 6 in³/gallon of wood

To run 5 gallons we therefore need 30 in³ or 491 cm³ of wood

Density of oak is .74 g/cm³

We therefore normally need 364 g or .80 lbs of wood

50% reduction due to better extraction requires 0.4 lbs of wood/ 5 gal

Barrel to Chip Surface Area Calculation Wine

A 53 gallon barrel has 3693 in² of surface area

This means there are 70 in²/gallon

Assume 1/4 inch penetration on all sides

We therefor require 6 in³/gallon of wood

To run 5 gallons we therefore need 30 in³ or 491 cm³ of wood

Density of oak is .74 g/cm³

We therefore normally need 364 g or .80 lbs of wood

50% reduction due to better extraction requires 0.4 lbs of wood

50% reduction for less flavor in wine requires 0.2 lbs of wood/5 gal