

# Stout świąteczny

- Gravity **15.8 BLG**
- ABV ---
- IBU **20**
- SRM **25**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.8 liter(s)**

## Steps

- Temp **67 C**, Time **50 min**
- Temp **75 C**, Time **1 min**

## Mash step by step

- Heat up **16.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **1 min** at **75C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (91.7%)	85 %	7
Grain	Strzegom Karmel 150	0.25 kg (4.6%)	75 %	150
Grain	Jęczmień palony	0.2 kg (3.7%)	--- %	900

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Willamette	30 g	60 min	5 %
Boil	Willamette	20 g	10 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	400 ml	Safale

## Extras

Type	Name	Amount	Use for	Time
Spice	Anyż	4 g	Boil	10 min
Spice	Goździki	5 g	Boil	10 min

Spice	Kardamon	6 g	Boil	10 min
Spice	Curacao	20 g	Boil	10 min
Spice	Skórka słodkiej pomarańczy	20 g	Boil	10 min
Spice	Gałka muszkatułowa	6 g	Boil	10 min
Spice	Cynamon	30 g	Boil	10 min

## Notes

- jęczmień palony ekstrahowany w zimnej wodzie  
*Feb 23, 2016, 7:45 PM*