

# Stout świąteczny

- Gravity **16.6 BLG**
- ABV ---
- IBU **47**
- SRM **69.9**
- Style **Dry Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **30.8 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **23.4 liter(s)**

## Steps

- Temp **65 C**, Time **45 min**
- Temp **70 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **30 min** at **70C**
- Keep mash **1 min** at **78C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **30.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (51.9%)	79 %	6
Grain	Weyermann - Chocolate Wheat	0.5 kg (6.5%)	74 %	788
Grain	Weyermann - Chocolate Rye	0.5 kg (6.5%)	20 %	493
Grain	Jęczmień palony	0.1 kg (1.3%)	55 %	985
Adjunct	Płatki owsiane	0.5 kg (6.5%)	60 %	6
Grain	Płatki pszeniczne	0.5 kg (6.5%)	85 %	3
Adjunct	płatki żytnie	0.5 kg (6.5%)	60 %	5
Grain	Strzegom Monachijski typ I	0.1 kg (1.3%)	79 %	16
Grain	Fawcett - Brown	0.5 kg (6.5%)	72 %	180
Grain	Fawcett - Pale Chocolate	0.5 kg (6.5%)	71 %	1100

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	magnum	40 g	45 min	12 %
Aroma (end of boil)	Willamette	50 g	15 min	5 %

Whirlpool	Simcoe	20 g	15 min	13.2 %
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### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	300 ml	Safale

### Extras

Type	Name	Amount	Use for	Time
Spice	laska wanilli	1 g	Secondary	7 day(s)
Spice	papryczka chilli	3 g	Secondary	7 day(s)
Spice	laska cynamonu	1 g	Secondary	7 day(s)
Spice	goździki	3 g	Secondary	7 day(s)