

Czarne Święta

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **44**
- SRM **34**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **34.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **22.5 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **21 liter(s)** of **76C** water or to achieve **34.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5.5 kg (61.1%)	79 %	6
Grain	Żytni	2 kg (22.2%)	85 %	8
Grain	Briess - Midnight Wheat Malt	0.2 kg (2.2%)	55 %	1084
Grain	Carafa II	0.25 kg (2.8%)	70 %	812
Grain	Jęczmień palony	0.2 kg (2.2%)	55 %	985
Grain	Strzegom Karmel 150	0.5 kg (5.6%)	75 %	150
Grain	Fawcett - Pale Chocolate	0.15 kg (1.7%)	71 %	600
Grain	Special B Castle	0.2 kg (2.2%)	70 %	350

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	60 g	60 min	7 %
Boil	Challenger	40 g	30 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Safale

Extras

Type	Name	Amount	Use for	Time
Spice	Tonka	30 g	Secondary	---
Spice	Curacao	60 g	Boil	10 min
Spice	Ziarna kakowaca	100 g	Secondary	---