

Czarna Sosna

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **34**
- SRM **17.7**
- Style **American Brown Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **1 %**
- Size with trub loss **25.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **1 %/h**
- Boil size **26.1 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **21 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **20 min**

Mash step by step

- Heat up **15.8 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **20 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	2 kg (38.1%)	80 %	7
Grain	Strzegom Wiedeński	2 kg (38.1%)	79 %	10
Grain	Pszeniczny	1 kg (19%)	85 %	4
Grain	Carafa III	0.25 kg (4.8%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	20 g	60 min	13 %
Boil	Simcoe	15 g	10 min	13.2 %
Boil	Amarillo	15 g	5 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

Extras

Type	Name	Amount	Use for	Time
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Flavor	Sok z pędów Sosny (pine)	250 g	Boil	5 min
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