

Pi

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **34.9**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **20 min** at **72C**
- Sparge using **28 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	1 kg (14.9%)	85 %	8
Grain	Briess - Pale Ale Malt	3 kg (44.8%)	80 %	5
Liquid Extract	ekstrakt słodowy ciemny Bruntal	1.7 kg (25.4%)	90 %	621
Grain	Grodziski pszeniczny wędzony dębem	1 kg (14.9%)	80 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	30 g	60 min	13 %
Aroma (end of boil)	Sybilla	20 g	10 min	3.5 %
Dry Hop	Centennial	30 g	9 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	---