

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **42**
- SRM **35.7**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **28.7 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **28.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.5 kg (40.3%)	81 %	4
Grain	Castle Pale Ale	2.5 kg (40.3%)	80 %	8
Grain	Pszeniczny	0.3 kg (4.8%)	85 %	4
Grain	Chocolate Malt (US)	0.3 kg (4.8%)	60 %	690
Grain	Jęczmień palony	0.3 kg (4.8%)	55 %	985
Grain	Black (Patent) Malt	0.3 kg (4.8%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	15 g	60 min	12 %
Boil	Amarillo	20 g	30 min	9.5 %
Boil	Sabro	15 g	10 min	15 %
Boil	Amarillo	15 g	10 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	100 ml	Fermentis