

Warka

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **29**
- SRM **4.1**
- Style **American Brown Ale**

Batch size

- Expected quantity of finished beer **48 liter(s)**
- Trub loss **5 %**
- Size with trub loss **50.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **60.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **42 liter(s)**
- Total mash volume **56 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **69 C**, Time **20 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **42 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **69C**
- Keep mash **10 min** at **75C**
- Sparge using **32.7 liter(s)** of **76C** water or to achieve **60.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	14 kg (100%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	120 g	30 min	6.7 %
Aroma (end of boil)	lubelski	30 g	10 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	21 g	Fermentis