

papa

- Gravity **14.1 BLG**
- ABV ---
- IBU **63**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **68 C**, Time **10 min**
- Temp **72 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **10 min** at **68C**
- Keep mash **5 min** at **72C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (100%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	40 g	60 min	11 %
Boil	Lublin (Lubelski)	25 g	10 min	4 %
Boil	lunga	25 g	10 min	11 %
Boil	Marynka	25 g	2 min	10 %
Boil	lunga	20 g	2 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale