

18 ale!!!

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **23**
- SRM **6.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

Steps

- Temp **67 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **17.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **20 min** at **67C**
- Keep mash **40 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Malting - Pilsneński 6-rzędowy	4.5 kg (78.9%)	80 %	5
Grain	Weyermann pszeniczny jasny	0.5 kg (8.8%)	80 %	5
Grain	Płatki owsiane	0.5 kg (8.8%)	60 %	3
Grain	Strzegom Karmel 150	0.2 kg (3.5%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	25 g	60 min	4 %
Boil	Mosaic	20 g	20 min	10 %
Dry Hop	Mosaic	80 g	3 day(s)	10 %

Yeasts

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