

A ja pale ale

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **40**
- SRM **4.4**
- 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 **15 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **19.8 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	1.9 kg (42.2%)	80 %	7
Grain	Briess - Pilsen Malt	2.1 kg (46.7%)	80.5 %	2
Grain	Strzegom Karmel 30	0.5 kg (11.1%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	20 g	60 min	9.5 %
Boil	Mosaic	20 g	17 min	10 %
Boil	Citra	20 g	10 min	12 %
Dry Hop	Amarillo	20 g	3 day(s)	9.5 %
Dry Hop	Mosaic	20 g	3 day(s)	10 %
Dry Hop	Citra	20 g	3 day(s)	12 %

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
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Fining	Mech Irlandzki	5 g	Boil	10 min
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