

APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **47**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **66 C**, Time **75 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **15 min** at **76C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **29.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale optima	4.5 kg (90%)	81.6 %	7
Grain	pszeniczny Malteurop	0.25 kg (5%)	80 %	6
Grain	Weyermann - Carapils	0.15 kg (3%)	78 %	4
Grain	Słód Carahell (R)	0.1 kg (2%)	75 %	25

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	lunga	10 g	60 min	12.8 %
Boil	Citra	10 g	20 min	12 %
Boil	Centennial	15 g	20 min	9.7 %
Boil	Amarillo	15 g	20 min	9.5 %
Boil	Citra	10 g	7 min	12 %
Boil	Centennial	15 g	7 min	9.7 %
Boil	Amarillo	15 g	7 min	9.5 %
Dry Hop	Citra	20 g	4 day(s)	12 %
Dry Hop	Amarillo	20 g	4 day(s)	9.5 %
Dry Hop	Centennial	20 g	4 day(s)	9.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	150 ml	gestwa po warce 26

Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc T	1 g	Boil	15 min