

APA

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **21**
- SRM **6.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **21.8 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale/Pils Crisp	5 kg (80.6%)	81 %	6
Grain	Strzegom Monachijski typ I	1 kg (16.1%)	81 %	16
Grain	KARMELOWY CRYSTAL	0.2 kg (3.2%)	80 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	11 %
Boil	Centennial PL	10 g	40 min	6.2 %
Boil	Cascade PL	10 g	20 min	6.6 %
Dry Hop	Citra	20 g	5 day(s)	12 %
Dry Hop	Cascade PL	30 g	3 day(s)	6.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11 g	---