

APA

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **29**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **64 C**, Time **60 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3.8 kg (77.6%)	85 %	7
Grain	Pszeniczny	0.5 kg (10.2%)	85 %	4
Grain	Barley, Flaked	0.2 kg (4.1%)	70 %	4
Grain	Oats, Flaked	0.2 kg (4.1%)	80 %	2
Grain	Wheat, Flaked	0.2 kg (4.1%)	77 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	5 g	60 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	5 g	30 min	15.5 %
Boil	Simcoe	20 g	10 min	13.2 %
Aroma (end of boil)	Simcoe	20 g	2 min	13.2 %
Aroma (end of boil)	Centennial	10 g	2 min	10.5 %
Aroma (end of boil)	Galaxy	10 g	2 min	15 %
Dry Hop	Simcoe	10 g	3 day(s)	13.2 %
Dry Hop	Centennial	20 g	3 day(s)	10.5 %
Dry Hop	Galaxy	20 g	3 day(s)	15 %