

APA

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **32**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **12 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **14.5 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **7.3 liter(s)**
- Total mash volume **9.9 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **7.3 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **10 min** at **72C**
- Sparge using **9.8 liter(s)** of **76C** water or to achieve **14.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (76.9%)	81 %	4
Grain	Strzegom Pszeniczny	0.5 kg (19.2%)	81 %	6
Grain	Carabelge	0.1 kg (3.8%)	80 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %