

APA

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **40**
- SRM **4.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **9.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **7.7 liter(s)**
- Total mash volume **9.9 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **7.7 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **6.5 liter(s)** of **76C** water or to achieve **12 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.8 kg (81.8%)	81 %	4
Grain	Pszeniczny	0.2 kg (9.1%)	85 %	4
Grain	Carahell	0.2 kg (9.1%)	77 %	26

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	10 g	30 min	13 %
Boil	Cascade	15 g	15 min	6 %
Boil	Simcoe	15 g	5 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	5 g	---