

APA

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **38**
- SRM **4.4**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **23 liter(s)**

Steps

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

Mash step by step

- Heat up **17.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (78.3%)	80 %	5
Grain	Viking Pilsner malt	1 kg (17.4%)	82 %	4
Grain	Pszeniczny	0.25 kg (4.3%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook PL	30 g	45 min	8 %
Boil	Chinook PL	20 g	15 min	8 %
Boil	Cascade PL	20 g	10 min	7.8 %
Aroma (end of boil)	Cascade PL	30 g	2 min	7.8 %
Aroma (end of boil)	Citra	50 g	0 min	13.6 %
Dry Hop	Citra	50 g	7 day(s)	13.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	Fermentis