

APA

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **37**
- SRM **5.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **16.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **22 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **18.4 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **14.3 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (97.6%)	80 %	5
Grain	Strzegom Karmel 100	0.1 kg (2.4%)	75 %	100

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	15 g	60 min	12 %
Boil	Amarillo	5 g	20 min	8.2 %
Boil	Citra	10 g	20 min	12 %
Whirlpool	Citra	10 g	0 min	12 %
Whirlpool	Amarillo	10 g	0 min	8.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
fermentis us-05	Ale	Slant	200 ml	---