

APA

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **42**
- SRM **10**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **13.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.8 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **18.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **16.7 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **13 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **8.9 liter(s)** of **76C** water or to achieve **18.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (94.6%)	80 %	5
Grain	Strzegom Karmel 300	0.2 kg (5.4%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	25 g	60 min	9.5 %
Aroma (end of boil)	citra	15 g	15 min	5.2 %
Dry Hop	Centennial	10 g	3 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	---